

State Conservation Commission Meeting

November 13, 2018

PA Department of Agriculture, Harrisburg PA

'Draft' Agenda

Briefing Session – 10:00am (Rm 309)

Review of Business Items

Review of SCC Programs and Strategic Planning Discussion

Business Session – 1:00 pm (Rm 309)

A. Opportunity for Public Comment

B. Business and Information Items

1. Approval of Minutes
 - a. September 11, 2018 (A)
 - b. October 9, 2018 Conference Call - CANCELLED
2. Proposed 2019 Public Meeting and Conference Call dates – Karl Brown, SCC (A)
3. Appointment of Vice-Chair for 2019 – Karl Brown, SCC (A)
4. Nutrient & Odor Management Program
 - a. Neal Zimmerman (CAO), Nutrient Management Plan, Northumberland County – Larry Baum, SCC (A)
 - b. John Rishel (CAO), Nutrient Management Plan, Northumberland County – Larry Baum, SCC (A)
 - c. Orlin Martin (CAO), Nutrient Management Plan, Northumberland County – Larry Baum, SCC (A)
 - d. Samuel Stoltzfus, Northumberland County – Larry Baum, SCC (A)
 - e. Kiliti Family Farm, David Kiliti (CAO), Nutrient Management Plan, Columbia County – Michael Walker, SCC (A)
 - f. Downs Racing, Mohegan Sun at Pocono Downs NMP amendment (CAO/CAFO), Luzerne – Michael Walker, SCC (A)
 - g. Nutrient Management Advisory Board Membership – Frank Schneider, SCC (NA)

5. Conservation District Funding
 - a. County Conservation District Request for Reserve Account – Johan Berger, SCC (A)
6. Spotted Lanternfly Education and Control Program Grant Update – Johan Berger, SCC
7. Dirt and Gravel Road Program Update – Roy Richardson, SCC; Steve Bloser, PSU; Ken Corradini, PSU.
8. Chesapeake Bay Program WIP Update – DEP

C. Written Reports

1. Program Reports
 - a. Act 38 Nutrient and Odor Management Program Report
 - b. Act 38 Facility Odor Management Program & Status Report on Plan Reviews
 - c. Certification and Education Program Accomplishment Report
 - d. REAP Accomplishment Report
 - e. Dirt, Gravel, and Low Volume Road Maintenance Report
2. Ombudsman Program Reports – Southern Allegheny Region (Blair County Conservation District) and Lancaster County Conservation District

D. Cooperating Agency Reports

Adjournment

Next Public Meetings December 11, 2018 Conference Call

January 30, 2019 Public Meeting – State College, PA

**STATE CONSERVATION COMMISSION
MEETING
PA Department of Agriculture, Harrisburg, PA
Tuesday, September 11, 2018 1:00 p.m.**

Draft Minutes

Members Present: Greg Hostetter for Secretary Russell Redding, PDA; Secretary Patrick McDonnell, DEP; Michael Flinchbaugh; Donald Koontz; Ross Orner; Ron Rohall; Ron Kopp; MaryAnn Warren; Chris Houser for Dr. Richard Roush, Penn State; Denise Coleman, NRCS; Drew Gilchrist, DCNR for Secretary Cindy Adams Dunn; Adam Walters for Denise Brinley, DCED; Brenda Shambaugh, PACD.

A. Public Input

There were no public comments presented.

B. Business and Information Items

1. a. Approval of Minutes – July 18, 2018 - Public Meeting. It was noted that there was a mistake in the Members Present section...Ron Kopp was in attendance at the July 18, 2018 meeting.

Upon correction of the July 18, 2018 minutes, MaryAnn Warren moved to approve the July 18, 2018 public meeting minutes. Motion seconded by Mike Flinchbaugh. Motion carried.

- b. Approval of Minutes – August 21, 2018 – Conference Call.

Don Koontz moved to approve the August 21, 2018 conference call minutes. Motion seconded by Ross Orner. Motion carried.

2. Nutrient and Odor Management Program

- a. Aaron Smucker (CAO), Nutrient Management Plan, Northumberland County. Michael Walker, SCC, reported that the Aaron Smucker farm is a proposed operation planning to build two organic broiler barns (26,250 birds per barn), a horse barn, and a dog kennel (40'x80') near Sunbury, PA. All collected poultry manure will be exported directly from the barns to a known importer who has adequate cropland acres to land apply this manure. All horse manure will be land applied and all dog kennel waste will be collected and placed in a roll-off dumpster and taken to a landfill. The animal equivalent units (AEUs) per acre are 64.57, classifying this operation as a concentrated animal operation (CAO) under Act 38 of 2005. The proposed NMP for Smucker's animal operation indicates needed BMPs to be implemented on the operation, namely – Animal Mortality Facility, Critical Area Seeding, Forage, & Biomass Planting (pastures) and storm water controls for the new barns and facilities proposed to be constructed. These practices are needed to assist the operator with overall management of this proposed broiler and horse operation.

Mike Flinchbaugh made a motion to approve the Aaron Smucker nutrient management plan. Motion seconded by Ross Orner. Motion carried.

3. Conservation District Funding.

- a. Funding Allocation for the Ombudsman Program – Blair and Lancaster Counties. Johan Berger, SCC, reported that Commission staff and representatives of Blair and Lancaster conservation districts met recently to review current Ombudsman Program activities and future program needs. It was determined that funding is available to expand current Ombudsman activities carried out by both Blair and Lancaster Conservation Districts. Blair has requested an increase of \$10,000 and Lancaster has requested an additional \$15,000 in annual funding. Additional funding expands current Ombudsman activities and expands support to the following initiatives:

Blair County Conservation District Ombudsman Program

- Support action items identified in the Alleghenies Ahead multi-county municipal plan related to agriculture.
- Work with PDA to develop Urban Ag initiatives in Southern Alleghenies and Facilitate Urban Ag (Farm to Fork) events within the region.
- Assist Penn State Extension with distributing information on farm diversification and ag alternatives (especially with dairy producers)
- Promote the Agriculture Conservation Stewardship (PACS) Program and encourage producer participation.

Lancaster County Conservation District Ombudsman Program

- Expand education and community outreach to municipal officials about ACRE, and other ag-related rules and regulations, partnering with staff from Penn State Agricultural and Shale Law Center.
- Represent the Ag community on the York County Stormwater Authority Implementation Planning team as they develop a model approach to address regional storm water issues.
- Expand legislators' understanding of issues related to agriculture's industry trends, economic impacts of agriculture, and future viability education and outreach to legislators.
- Provide a targeted outreach effort to the equine community regarding compliance with manure management and Ag E&S requirements through developing relationships with service providers that the equine community trusts and respects.
- Reinforce education and outreach to farmers about minimizing potential conflicts including fly minimization around barns and in field applications; proper mortality disposal, and good neighbor relations.

Mike Flinchbaugh made a motion to approve the increased funding request for Blair (\$10,000) and Lancaster (\$15,000) County conservation districts. Motion seconded by Ron Rohall. Motion carried.

- b. Statewide Conservation District FY 2017-2018 Funding Report and Discussion. Karl Brown, SCC, and Fred Fiscus, DEP, reported that conservation districts

receive funding from a diverse group of state agency programs. These state funds support both district operations (staff salary, benefits and operations) as well as pass-through grant funding to support various state program goals and objectives. In FY 2017-18, districts received and managed a total of approximately \$70 million in state funds for operations and grant pass-through. Understanding the source and scope of these funds will help Commission members as they engage in strategic planning discussions later this Fall. Fred Fiscus reviewed an annual program budgeting worksheet with Commission members that staff feel is an appropriate tool to assist conservation districts on annual budget development and provide state program staff and the Commission a holistic view of funding use by conservation districts.

Action: No action required.

- c. Forest County Conservation District Request for Reserve Account. Johan Berger, SCC, reported that Forest County Conservation District is requesting approval to place \$20,000 of their FY 2018-19 Unconventional Gas Well Fund (UGWF) allocation into an existing, previously Commission-approved scholarship reserve account for the Russell M. Smith Scholarship Fund. This fund awards annual scholarships in the amount of \$1,000 to Forest County residents planning to continue their education in a conservation or forestry-related field.

Don Koontz made a motion to approve the Forest County Conservation District's request to place \$20,000 in FY 2018-19 UGWF revenue into their existing Russell M. Smith Scholarship Fund. Motion seconded by Mary Ann Warren. Motion carried.

4. Proposal for Strategic Planning/SWOT. Karl Brown, SCC, reported that in 2008, the Commission utilized a Strength, Weakness, Opportunity, and Threat (SWOT) survey as a part of strategic planning exercises. A SWOT analysis is an effective tool used to help an organization's planning team analyze the opportunities and threats in the external environment, as well as the internal strengths and weaknesses of the organization. The planning team can then discuss strategies for seizing opportunities, neutralizing threats, capitalizing on strengths, and addressing or minimizing weaknesses. Commission staff is proposing to utilize this same survey approach as part of a strategic planning effort beginning this Fall 2018. Conservation districts, cooperating agencies, and organizations will be invited to complete the SWOT analysis.

Action Requested: No action required.

5. Spotted Lanternfly Education and Control Program Grant. Johan Berger, SCC, reported that in August 2018, Commission staff, in cooperation with PDA Bureau of Plant Industry staff, provided notice to thirteen county conservation districts in the Spotted Lanternfly Quarantine Zone that \$500,000 federal funds were available for districts interested in assisting with outreach, education, and control measures. These districts have been asked to provide a funding application by September 14, 2018. Districts may also provide a Letter of Intent if their district board has not taken formal action on the district's SLF funding application. This Letter of Intent will assist the Department and Commission to better prioritize and allocate these funds.

Action Requested: No action required.

6. Chesapeake Bay Program WIP Update. Deputy Secretary Greg Hostetter, PDA, co-chair of the PA Chesapeake Bay Agricultural Work Group, provided an overview of recommendations made by the Pennsylvania Chesapeake Bay Program Agricultural Workgroup regarding the BMPs and level of effort recommended in order for the Commonwealth to meet nutrient and sediment reductions for the Chesapeake Bay watershed Total Maximum Daily Load (TMDL). Veronica Kasi, Director of DEP's Chesapeake Bay Program Office also provided a general update on the Commonwealth's effort to finalize recommendations for the Phase III WIP. Agricultural recommendations included:

- Agricultural compliance
- Performance of practices for improvement of soil health, residue management
- Performance of practices for improvement of soil health, management and use of cover crops
- Performance of practices for improvement of soil health, prescribed grazing
- Enhanced NM planning – lands not receiving animal manure
- Enhanced development and operation of manure storage facilities
- Precision feeding and management diet
- Development of integrated system for elimination of excess manure
- Enhanced development of forested and grassed buffer

Additional recommendations included:

- Discourage imposition of legal mandates on stakeholders and landowners
- Financial and tax incentives for landowner participation in changing or preserving land use
- Reporting and confidentiality
- Increased technical assistance in design and implementation of agriculture BMPs
- Advanced soil health initiatives
- Innovative regulatory incentives for attainment of priority agricultural BMP implementation initiatives
- Reevaluations of existing funding sources and their uses
- Enhanced Nutrient Management planning for biosolids
- Expanded coordination of joint MS4 and nonpoint source nutrient pollution reduction actions and offsetting
- Coordinated streambank measures
- Increased and extensive focus in Legacy Sediment programs.

Action: No action required.

C. Written Reports – Self Explanatory

1. Program Reports
 - a. Act 38 Nutrient and Odor Management Program Report
 - b. Act 38 Facility Odor Management Program & Status Report on Plan Reviews
2. Ombudsman Program Reports – Southern Allegheny Region (Blair County Conservation District and Lancaster County Conservation District)

D. Cooperating Agency Reports – DCNR, PDA, Penn State, DCED, DEP, NRCS, PACD

DCNR - Drew Gilchrist reported that September is PA Trails month. Everyone is invited to explore one of the 650 trails in the state that total over 12,000 miles of hiking, paddling, and riding fun. More information can be obtained at ExplorePATrails.com. ExplorePATrails.com has a database of trail information to assist with finding specific information regarding trails across PA. There is also specific information about the PA Trail of the Year, Forbidden Drive, and other featured trails.

PDA – Deputy Secretary Greg Hostetter reported that the All-American Dairy Show will be held from Saturday, September 15 through Wednesday, September 19, 2018. He mentioned the ongoing issues with Spotted Lanternfly. NRCS is helping with flood disaster areas in Pennsylvania. There is a new invasive species in Pennsylvania – the Asian Longhorned Tick. The West Nile virus has also been a problem this year, due to the very wet weather. Ag Research Request for Proposals (RFPs) went out recently and were posted in the PA Bulletin. There was an all Ag staff, agency-wide meeting on August 22, 2018 at the PA Farm Show Building to discuss the LEAN initiative and strategic planning.

PSU – No report.

DCED – No report.

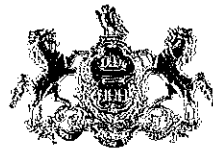
DEP – Secretary McDonnell reported on the e-Permitting 105 program. It is now being reviewed, and there will soon be a go-live date for this program.

NRCS – Denise Coleman reported that there is Federal assistance available through EWP for the July 21, 2018 storm damage that affected residences and businesses in the following 18 counties: York, Lancaster, Lebanon, Bradford, Sullivan, Wyoming, Columbia, Lycoming, Schuylkill, Berks, Chester, Montour, Wayne, Susquehanna, Dauphin, Lackawanna, Luzerne, and Northampton. The Emergency Watershed Protection (EWP) Program, a federal emergency recovery program, helps local communities recover after a natural disaster strikes. The program offers technical and financial assistance to help local communities relieve imminent threats to life and property caused by floods, fires, windstorms and other natural disasters that impair a watershed. Applications are being accepted for this assistance until October 15, 2018.

PACD – Brenda Shambaugh reported that the PACD/SCC Winter meeting will be held at the Toftrees Golf Resort in State College on January 30-31, 2019. The Joint Annual Conference in July 2019 will be at the Genetti Hotel in Williamsport, PA. Thank you to Matt Miller for organizing the Management Summit in September. Fifty districts were in attendance at these meetings. The PACD regional meetings will be starting on October 4, 2018. Regarding Riparian Buffers, DCNR provided funding for districts to put together projects. Monroe County had a \$48,000 project.

Adjournment: Meeting adjourned at 3:27 p.m.

Next Public Meeting: October 9, 2018 – Conference Call
November 13, 2018 – PA Department of Agriculture Building,
Harrisburg, PA, Room 309



**COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION**

October 16, 2018

To: State Conservation Commission Members
From: Karl G. Brown
Executive Secretary
RE: Tentative 2019 Meeting Dates and Conference Call Dates

The following are proposed 2019 Commission meeting dates.

2019 Proposed Meeting Dates

| <u>Date</u> | | <u>Location</u> |
|----------------------------|---------------------------|----------------------------------|
| January 30th | (PACD Winter Meeting) | State College - Toftrees |
| March 12 th | | Harrisburg |
| May 14 th | | Harrisburg |
| July 17 th | (Joint Annual Conference) | Williamsport–Genetti Hotel(tent) |
| September 10 th | | Harrisburg |
| November 12 th | | Harrisburg |

2019 Proposed Conference Call Dates
(8:30-10:00AM)

February 19th
April 9th
June 11th
August 20th
October 8th
December 10th



COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

Date: November 6, 2018

To: State Conservation Commission Members

From: Karl G. Brown
Executive Secretary

RE: Election of Vice-Chairperson 2019

Background:

Section 4(1) of the Conservation District Law, Act 217, states in part that, “at the last regular meeting of the Commission in the calendar year, a vice-chairperson shall be elected by the members of the Commission and shall serve in that capacity for the ensuing year.”

Since the November 13, 2018 is the last regularly scheduled meeting of the State Conservation Commission for 2018, action to fill the position of vice-chairperson for 2019 is necessary. Mr. Michael Flinchbaugh currently serves as the vice-chairperson of the Commission, and he has expressed an interest in accepting the nomination for election as Vice-Chairperson, of the Commission, for 2019.

Responsibility of the vice-chairperson is to preside over any business meetings of the Commission in the absence of the Chairman.

Action Required:

A motion to nominate and elect Mr. Michael Flinchbaugh as Commission vice-chairperson for 2019 is necessary.



**COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION**

DATE: September 20, 2018

TO: Members
State Conservation Commission

FROM: Larry G Baum
State Conservation Commission

SUBJECT: Nutrient Management Plan Review
Neal Zimmerman., Northumberland County, Pennsylvania

Action Requested

Action on a Nutrient Management Plan for the following operation in Luzerne County:

Neil Zimmerman
10 Patton Road
Danville, PA 17821

Background

I have completed the required review of the subject nutrient management plan listed above. Final corrections to the plan were received at the State Conservation Commission on September 20, 2018. As of that date, the plan was considered to be in its final form. The operation, located in Northumberland County, is considered to be a Concentrated Animal Operation (CAO) under the PA Nutrient and Odor Management Act (Act 38 of 2005). The Commission is the proper authority to take action on this plan, because Northumberland County Conservation District is not delegated plan review and action responsibilities under the Act 38 program.

A brief description of the operation, concluding the staff recommendation, is attached. Also attached is a copy of the complete nutrient management plan for the operation.

Thank you for considering this plan for Commission action.

Farm Descriptions

Neal Zimmerman NMP, Northumberland County – The Neal Zimmerman operation is an existing poultry operation which consists of 96,000 broilers. The manure is cleaned out of the barns after each flock. The manure may be temporarily stacked at the far end of the barns before it is exported to the importer.

There is no crop fields or crop acres on this operation under management control of Neal Zimmerman. There are 70 acres on this operation with 1 acre under control of Neal Zimmerman. Farmstead is 8.0 acres. The importer is Lloyd, Nevin, and Merle Zimmerman for application of the broiler manure on known crop acres. The mortality is composed onsite with the volume less than 5 tons per year. The mortality compost is exported with the broiler manure.

The broiler animal equivalent units on the Neal Zimmerman operation is 263.30. There are no crop production acres associated to the Neal Zimmerman operation. The animal equivalent units per acre for the Neal Zimmerman operation is 263.30, classifying this operation as a concentrated animal operation under Act 38 of 2005.

The proposed NMP Neal Zimmerman indicates no needed BMPs to be implemented.

Based on my review, the NMP developed for Neal Zimmerman operation meets the requirements of the PA Nutrient and Odor Management Act and Regulations, and I therefore recommend Commission approval.

NON-FINAL FORM

Version 2

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP

9/20/2018
Month, Day and Year

NON-FINAL FORM

Version 1

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP

8/17/2018
Month, Day and Year

Nutrient Management Plan

For Crop Year(s)

2020

2021

Prepared For

Operator's Name, Mailing Address, Telephone Number(s)

NEAL ZIMMERMAN

10 PATTON ROAD

DANVILLE, PA 17821

570-271-0350

Operation's Location Address (if different than above)

Site Name (CAFOs)

Prepared By

Nutrient Management Specialist's Name, Address, Telephone Number(s)

Darren Shenk

Red Barn Consulting, Inc.

3050 Yellow Goose Road

Lancaster, PA 17601

717-393-2176

Nutrient Management Specialist's Program Certification Number

1906-NMC

Administratively Complete Date

8/17/18

Plan Approval Date

Plan Update Submission Date(s)

(updates to the approved plan not requiring board action)

FINAL FORM

Version of the plan will be considered final by the Conservation District Board

November 13, 2018 meeting

September 20, 2018
MONTH, DAY AND YEAR

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Nutrient Management Plan Summary (Excel)

 Nutrient Management Plan Summary Notes (Excel)

 Manure Spreader Calibration Notes (Excel)

 Additional Nutrient Management Plan Requirements (Word)

 Operator Management Map (Mapping Program)

Appendix 1: Nutrient Management Plan Agreement & Responsibilities (Word)

Appendix 2: Operation Information (Word)

Appendix 3: Manure Group Information (Excel)

Appendix 4: Crop & Manure Management Information (Excel)

Appendix 5: Phosphorus Index (Excel)

Appendix 6: Manure Management (Word)

Appendix 7: Stormwater Control (Word)

Appendix 8: Importer/Broker Agreements & Nutrient Balance Sheets (Word & Excel)

Appendix 9: Operation Maps (Mapping Program)

 Topographic Map

 Soils Map

Appendix 10: Supporting Information & Documentation (Excel)

(List below the required documents included in the plan.)

 Manure average

 Soil description

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 0 Crop Year(s) 2019, 2020, 2021

Whole Farm Note: 100% export to Lloyd Zimmerman, Nevin Zimmerman, Merle Zimmerman
 If manure runs out for any field, consult Appendix 4 of the plan for that field. The fertilizer required on any part of the field that does not receive manure can be determined from the 'Net Nutrients Required' for that field.

Operation Acres:
 Total Acres: 70 Total Acres Available For Nutrient Application Under Operator's Control: Owned: 0 Rented: 0

Animal Equivalent Units: 263.30 Animal Equivalent Units Per Acre: 263.30

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | | | | |
|--------------|-------|------|--------------|--------------------|------------------------|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|--|--|--|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | | | |
| | | | | | | | | | | | | | | | | | | |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NMP Summary Notes

Crop Years 2019, 2020, 2021

| CMU/Field ID | Notes |
|--------------|-------|
|--------------|-------|

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Manure Spreader Calibration Notes

1

Crop Years 2019, 2020, 2021

| Manure Application Rate | Manure Spreader Used | Spreader Settings | Tractor Used (if applicable) | Tractor Settings (speed, gear, rpm, pto, etc.) |
|-------------------------|----------------------|-------------------|------------------------------|--|
| NA | | | | |
| | | | | |
| | | | | |
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Additional Nutrient Management Plan Requirements

Manure Management and Stormwater BMP Implementation Summary

| Best Management Practice | NRCS Practice Code ¹ | BMP Location | Implementation Season & Year |
|--------------------------|---------------------------------|--------------|------------------------------|
| None | | | |
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¹ If applicable, enter USDA-NRCS Practice Code. For other non-technical BMPs, leave blank.

In-Field Manure Stacking Procedures

Manure must be applied to the field within 120 days of stacking or the stacks must be covered. Stacks must be implemented and maintained according to sound BMPs, addressing concerns such as soil type, soil slope, shape of the pile, setbacks, and rotation of piles.

This guidance applies to non-emergency related manure stacks that will remain in a field for an extended period of time (more than 2 days). This guidance applies to farms complying under Act 38, as well as the farms that import manure from these planned farms.

The regulations call for the implementation of BMPs relating to in-field manure stacking. Guidance on how to meet that requirement is as follows:

1. The regulations states that the land application of the stacked manure shall occur within 120 days of stacking or by the next growing season, whichever is less.
 - Covering of manure stacks with an impermeable cover will eliminate the need to apply the manure within the 120 day, or by the next growing season, limitation.
2. The regulation also states that the location of the in-field manure stacking sites must be identified on the nutrient management plan and nutrient balance sheet maps.
3. The stacks should be rotated so that stacking will only occur once every 4 years on a specific manure stacking pile footprint.
4. Stacked piles should be stacked in a cone or windrow shape so as to shed rainwater. This shape limitation would not be necessary if, upon stacking, the stack will be covered with an impermeable cover.
5. Stacks should be setback 150 feet from streams (intermittent and perennial), lakes, ponds, open existing sinkholes, and active water wells.
6. Stacks should not be located in water concentration areas.
7. Stacks should not be located on areas that have excessively drained soils. This limitation would not be necessary if, upon stacking, the stack will be covered with an impermeable cover.
8. Stacks should not be located within 3 feet of the seasonal high water table.
9. Stacks should not be located above subsurface drain tiles. This limitation would not be necessary if, upon stacking, the stack will be covered with an impermeable cover.
10. Stacking sites should not have a slope of greater than 8%.
11. Stacking sites with slopes between 3% and 8% should not be located further than 150 feet from the top of the slope unless a diversion is constructed of soil above the stack.

The above criteria only address situations where manure is stacked in a field in order to facilitate manure application to those fields where the manure is being stacked. This guidance does not pertain to areas used for the composting of manure or dead animals.

Additional CAFO Requirements

In-field stacking criteria, winter storage requirements, and other issues identified by DEP's review of the nutrient management plan.

Not a CAFO

Proposed Manure Storage Description

Type, dimensions, volume, freeboard and location on map.

None

Description of Planned Alternative Manure Technology Practices

Type of practice, volume of manure addressed, and result of practice.

None

Exported Manure Summary

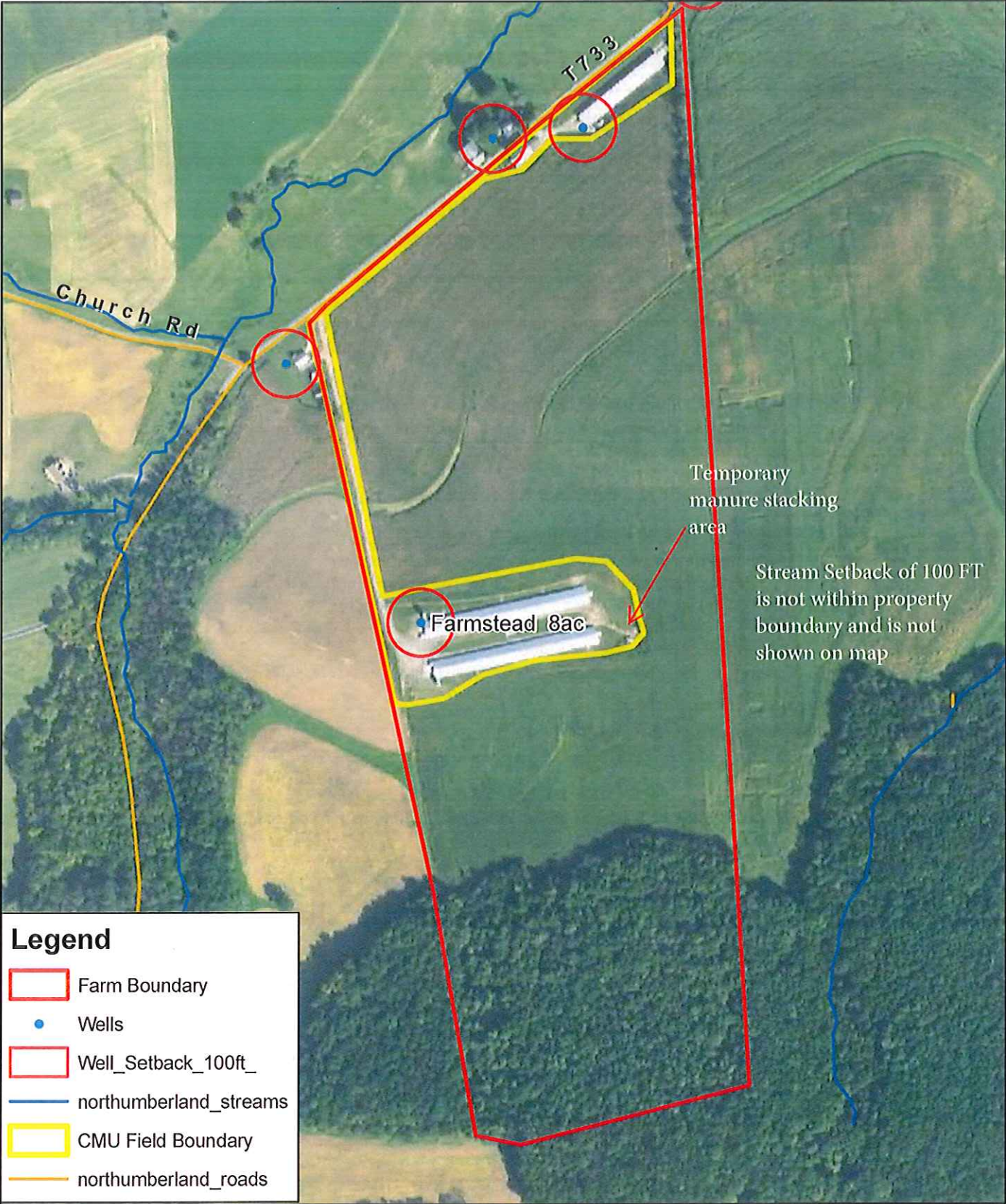
Summarize in a short paragraph the arrangements proposed for the manure to be exported from the operation. This information is described in more detail in Appendix 8 of this plan.

All excess manure produced on this operation is exported to Lloyd Zimmerman/neighboring farms to be utilized for agricultural purposes.

Operator Management Map

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Operator Management Map** is to be included here in the Nutrient Management Plan Summary and must include field identification, acreage and boundaries, manure application setback areas and buffers and associated landscape features (streams and other water bodies, sinkholes and active water wells), location of existing and proposed structural BMPs (including manure storage facilities), location of existing or proposed emergency manure stacking areas and in-field manure stacking areas, and road names adjacent to and within the operation. All features on the map must be clearly identified and include a legend for setback areas and other features. The Topographic Map and Soils Map must be included in Appendix 9.

Aerial Map Neal Zimmerman



Nutrient Management Plan Agreement & Responsibilities

Plan Implementation Requirements

This nutrient management plan has been developed to meet the requirements of the following programs:

| | | | | | |
|-------------------------------------|---|-------------------------------------|-----|--------------------------|-----------------|
| <input checked="" type="checkbox"/> | Pennsylvania Act 38 of 2005 | <input checked="" type="checkbox"/> | CAO | <input type="checkbox"/> | VAO (check one) |
| <input type="checkbox"/> | Pennsylvania CAFO (Concentrated Animal Feeding Operation) program | | | | |
| <input type="checkbox"/> | Other program: _____ | | | | |

Plans developed under these programs are required to be implemented as approved in order to maintain compliance with the specific law or program. Implementation includes adherence to manure and fertilizer application rates, timing, setbacks and conditions; installation of listed BMPs within implementation timeframes; and record keeping obligations of the program.

The nutrient management plan has been developed as a: (check one)

| | | | | |
|-------------------------------------|----------------------------|--|------|------|
| <input type="checkbox"/> | 1-Year Plan for Crop Year | _____ (annual updates will be completed) | | |
| <input checked="" type="checkbox"/> | 3-Year Plan for Crop Years | 2019 | 2020 | 2021 |

Records required to be maintained include the following:

- 1) Annual crop yields
- 2) Manure and fertilizer application rates, locations and date of application
- 3) Manure production figures for the various manure groups listed in your plan
- 4) Soil test reports (testing required every 3 years per crop management unit)
- 5) Manure test reports (testing required once a year for each manure group)
- 6) Number of animals on pasture, number of days on pasture, and hours per day on pasture
- 7) For operations exporting manure, Manure Export Sheets
- 8) BMP designs and certification for new liquid and semi-solid manure storage facilities

The following has been confirmed:

| | |
|-------------------------------------|--|
| <input type="checkbox"/> | Verification of Ag E&S Plan |
| <input checked="" type="checkbox"/> | Verification of Existing Site Specific Emergency Response Plan |

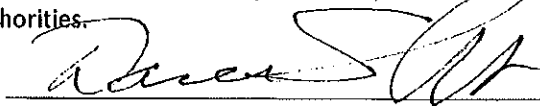
Verification that owners of rented/leased lands have been notified that a nutrient management plan has been developed which calls for manure to be applied to their lands and that they have no objections to the plan requirements.

| | | | |
|--------------------------|-----------------|-------------------------------------|------------------------|
| <input type="checkbox"/> | Owners Notified | <input checked="" type="checkbox"/> | No Rented/Leased Lands |
|--------------------------|-----------------|-------------------------------------|------------------------|

Specialist Signature

I affirm that the information contained in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, based on information provided by the operator; that this plan has been developed in accordance with the criteria established for the program(s) indicated above; and that I have presented the final complete plan to the operator and discussed the content and implementation of this plan with the operator, subject to the penalties of 18 Pa.C.S.A. § 4904, relating to unsworn falsification to authorities.

Specialist Signature



Date

8/9/2018

Operator Signature

I understand and agree that I will implement the practices, procedures and record keeping obligations as outlined in this plan in order to protect water quality and address the nutrient needs of the crops associated with the operation. I agree that if I use a commercial hauler or broker for the application or export of manure, that only haulers or brokers that hold a valid certification issued by the Pa Department of Agriculture, under Act 49 of 2004, will be used. I affirm that all information provided in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, and reflects the current and planned activities of the operation; and that, if this plan was completed by a nutrient management specialist, I have reviewed the final completed plan and the specialist has discussed the content and implementation of this plan with me, subject to the penalties of 18 Pa.C.S.A. § 4904, relating to unsworn falsification to authorities.

Operator Signature



Operator Title

Owner/Operator

Date

8/9/2018

Appendix 2 Operation Information

Operation Description

Animal types and numbers; cropland, hayland and pastureland acreage; farmstead acreage; crop rotation (crops, sequence of crops, and number of years for each crop); manure group management, including atypical manure (contributing animal groups, collection, storage and handling procedures); mortality composting management.

This is an existing poultry operation which consists of 96,000 broilers. There are 70 acres on this operation but 1 acre are under the control of this operator. Farmstead is 8.0 acres. The manure is cleaned out of the barns after each flock. The manure may be temporarily stacked at the far end of the barns before it is exported to the importer. The mortality is composted on site and the volume is less than 5 tons per year. The compost is exported with the broiler manure.

County(s)

Northumberland

Name of Receiving Stream(s)/Watershed(s)

Wilson Run

Notation of Special Protection Waters

None

Operation Acres

Total Acres: 70.0

Total Acres Available for Nutrient Application Under Operator's Control

Owned: 0

Rented: 0

Names & Addresses of Owners of Rented or Leased Land

NA

Existing Manure Storages & Capacity

Type of storage, dimensions, useable capacity, freeboard, top or bottom loaded, dimensions and description of contributing runoff area, description of wastewater additions, types and amounts of bedding. Briefly describe, for each manure group, manure storage management during removal (degree of agitation, method of manure removal, extent the storage is emptied, type of unremoved manure, etc.) and manure sampling procedures.

NA

Manure Application Equipment Capacity & Practical Application Rates

Description of application equipment, practical application rates based on calibration and calibration method used,

| Appendix 3 Manure Group Information Crop Yrs. 2019, 2020, 2021 | | Broiler | |
|--|--|--------------------|--|
| Manure Report Date (note if averaging several reports) | 7/11/2018 (average) | | |
| Laboratory Name | Ag Essentials | | |
| Manure Type | Poultry | | |
| Manure Unit (lbs/ton or 1000 gal) | lb/ton | | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 60.87 | | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 8.83 | | |
| Total Organic N (lbs/ton or 1000 gal) | 52.04 Go to JMP Index | | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 37.23 Go to Appendix 3 Input | | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 40.89 Go to Manure Avg Input | | |
| Percent Solids | 63.69 Grading Calculator | | |
| PSC Value (analytical or book value) | 0.80 | | |
| Percent Moisture | 36.31 | | |
| Manure Group AEU's | 263.30 | | |
| Description: Site & Season Applied | Temporary stacking or clean out every flock | 100% Export | |
| Inventory Method | Records | | |
| | Collected Calc. | Uncollected Calc. | |
| Manure Group Identification | Broiler | | |
| CALCULATED: Total Manure Collected Per Manure Group Units | | | |
| RECORDS: Total Manure Collected Per Manure Group Unit | 600.0 tons | | |
| Manure Used On-Farm Units | Collected 0.0 Tons | Uncollected 0.0 | |
| Manure Exported Units | 600.0 tons | | |
| Manure Allocation Balance Units | 0.0 Tons | 0.0 | |
| Manure Balance as a Percent of Total Manure Collected | 0.0% | | |
| Total Rainfall and Runoff | 0 tons | | |

| Appendix 3 Manure Group Information Crop Yrs. 2019, 2020, 2021 | | Broiler |
|--|------------------------------------|--|
| | Manure Generation per Animal Group | Uncollected Manure Nutrient Analysis Book Values |
| Animal Group 1 | Broiler | |
| Animal Type | Broiler, large 0-53 days | |
| Animal Number | 69,000 | |
| Animal Weight | 3.55 | |
| Animal Group AUs | 340.80 | |
| Animal Group AEUs | 263.30 | |
| Daily Manure Production per AU | 20.0 | |
| Total Days Manure Produced | 282 | |
| Total Manure Produced | | |
| Days On Pasture | 0 | |
| Hours Per Day On Pasture | 0 | |
| Total Bedding | | |
| Total Washwater | | |
| CALCULATED - Total Uncollected Manure Per Animal Group | | |
| CALCULATED - Total Manure Collected Per Animal Group | | 263.30 |

| App. 4: Crop Yrs. 2019, 2020, 2021 |
|---|
| CMUField ID |
| Acres |
| Soil Test Report Date |
| Laboratory Name |
| Soil Test Levels (Webbch-3 P & K) (Show conversions to ppm in Appendix 10) |
| P Index Part A Evaluation |
| Part A Result |
| Crop |
| Planned Yield |
| PSU Soil Test Recommendation (lb/A) |
| User Soil Test Recommendation (lb/A) |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) |
| P Index Application Method |
| Double Crop Carry Over N (lb/A) |
| Manure History Description Residual Manure N (lb/A) |
| Legume History Description Residual Legume N (lb/A) |
| Net Nutrients Required (lb/A) |
| Manure Group |
| Application Season Management (Incorporation, cover crops, etc.) |
| Availability Factors (Total N or NH-N & Organic N) |
| P Index Application Method |
| N Balanced Manure Rate (ton, gal/A) |
| P Removal Balance Manure Rate (ton or gal/A, if required by P Index) |
| P Index Value |
| Planned Manure Rate (ton or gal/A) |
| Nutrients Applied at Planned Manure Rate (lb/A) |
| Nutrient Balance after Manure |
| Supplemental Fertilizer (lb/A) |
| P Index Application Method |
| Final Nutrient Balance (lb/A) |
| Muspie Application |
| Manure Utilized on CMU |

Appendix 5 - P Index

No P Index Part B fields in this Plan

[Go to NMP Index](#)

[Go to App 4 Input](#)

Crop Yrs. 2019, 2020, 2021

Pennsylvania P Index Version 2

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | CMU/Field ID |
|---|---|---|---|---|--|--|
| Is the CMU in a Special Protection watershed? A significant farm management change as defined by Act 38? Soil Test Mehlich 3 P greater than 200 ppm P? Contributing Distance from CMU to receiving water <150 ft.? Is winter manure application planned for this field? | | Is the CMU in a Special Protection watershed? Is there a significant farm management change as defined by Act 38? Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) Is the Contributing Distance from this CMU to receiving water less than 150 ft.? Is winter manure application planned for this field? | | | | If the answer is Yes to any of these questions, Part B must be used. |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | | | | | |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | Fertilizer P (lb P2O5/acre) 1.0 Surface applied to frozen or snow covered soil | |
| SUPPLEMENTAL P FERTILIZER | | | | | | |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | Fertilizer P (lb P2O5/acre) 1.0 Surface applied to frozen or snow covered soil | |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | |
| MANURE P RATE | | | | | | |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | Manure P (lb P2O5/acre) 1.0 Surface applied to frozen or snow covered soil | |
| P SOURCE COEFFICIENT ³ | | | | | | |
| Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | | |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | |
| Source Factor Sum | | | | | | |
| PART B: TRANSPORT FACTORS | | Erosion | | | | |
| EROSION | | Soil Loss (ton/acre/yr) | | | | |
| RUNOFF POTENTIAL | 0 Drainage Class is Excessively | 2 Drainage Class is Somewhat Excessively | 4 Drainage Class is Well/Moderately Well | 6 Drainage Class is Somewhat Poorly | 8 Drainage Class is Poorly/Very Poorly | |
| SUBSURFACE DRAINAGE | 0 None | 1 Random | | 2 ¹ Patterned | | |
| CONTRIBUTING DISTANCE | 0 > 500 ft | 2 350 to 500 ft | 4 200 to 349 ft | 6 100 to 199 ft OR < 100 ft with 35 ft. buffer | 8 ² < 100 ft | |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | |
| MODIFIED CONNECTIVITY | | | | | | |
| 0.5 60 ft Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | |
| Transport Sum x Modified Connectivity / 24 | | | | | | |
| P Index Value = 2 x Source x Transport | | | | | | |
| Low: 59 or less Nitrogen based management | | Medium: 60 to 79 Nitrogen based management | | High: 80 to 99 Phosphorus limited to crop removal | | Very High: 100 or greater No Phosphorus applied |

¹ OR rapidly permeable soil near a stream

² 'S' factor does not apply to fields receiving manure with a 35 ft. buffer.

³ Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an 'E'.

the data recorded during equipment calibration is to be retained on the farm. If applicable, name and Act 49 certification number of custom applicator.

All manure application is done by the importer. No manure is applied by this operator.

Appendix 6
Manure Management

Date of Site Evaluation: 4/20/2018

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated.

Animal housing and compost area were evaluated.

Identification of Inadequate Manure Management Practices and Conditions

List of each specific inadequate manure management practice or condition identified.

None

BMPs to Address Manure Management Problem Areas

List of specific BMPs (including PA Technical Guide standard name and number) and management changes that will be implemented to address each of the inadequate practices listed above.

None

Appendix 7
Stormwater Control

Date of Site Evaluation: 4/20/2018

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated.

Animal housing, manure storage and compost area were evaluated.

Identification of Critical Runoff Problem Areas

List of each specific critical runoff problem area identified.

None

BMPs to Address Critical Runoff Problem Areas

List of BMPs (including PA Technical Guide standard name and number) and specific management changes that will be implemented to address each of the critical runoff problem areas listed above.

None

Appendix 8
Importer/Broker Agreements & NBSs

Nutrient Balance Sheets are not required for importers that have an approved Nutrient Management Plan.

NBS attached for Lloyd Zimmerman

Exporter/Importer Agreement

Manure Used For Agricultural Land Application

Developed consistent with the PA Nutrient and Odor Management Act Program

- 1) This agreement is entered into on 8/9/2018, by Neal Zimmerman (the "exporter") who will supply manure, and Lloyd Zimmerman (the "importer"), who will receive the manure from the exporter. Lloyd Zimmerman, Nevin Zimmerman, Merle Zimmerman
- 2) The purpose of this agreement is to set forth the mutual responsibilities and understanding of the parties with respect to the export of manure from the exporter to the importer.
- 3) The exporter is located at (county, twp, and address): 10 Patton Road Danville, PA 17821
Rush Twp, Northumberland County
- 4) The exporter will, as the supply of manure allows, provide the following amounts of manure during the seasons outlined below:

Tons of Broiler (species) manure, per season:
Spring 600T Summer _____ Fall 600T Winter 87.8T

Gallons of _____ (species) manure, per season:
Spring _____ Summer _____ Fall _____ Winter _____

Total planned manure exported: (supply of manure may be less than what is planned)

Tons of Broiler (species) manure: 600 Tons
Gallons of _____ (species) manure: _____

If multi-species are planned, please add additional lines:

- 5) The importer's location and other relevant information as it relates to this manure export, is as follows (maps indicating the location of importing fields must be attached to the supporting Nutrient Balance Sheets if manure is to be land applied at the importing site):
 - a) Phone number: 570 275-5766
 - b) County(s): Northumberland
 - c) Address: 2413 Snyderstown Road Danville, PA 17821
 - d) Township(s): Rush
 - e) Owner(s) of the property receiving manure: Bob Campbell, Claud Knoebel, Bob Hess
 - f) Total cropland acres managed by the importer: 700 AC
 - f) Number and type of animals raised by the importer: 260 cows, 40 dry cows
250 Replacements
 - g) Number of acres available for this imported manure: 288.7 Ac
 - h) Other manures (type, amount) imported to the site AND/OR utilized on the site: (Note- this would include manure that is generated on the site by the Importers animals, etc.) No
 - If other manure is generated, imported and/or utilized, is it applied to the same acres as indicated in item "g" above (relating to "acres available"): Yes or (No)

- If other manure is generated, imported and/or utilized, is it applied during the same season as the imported manure: Yes or No
- 6) The exporter will use a Manure Export Sheet to record all manure exported to the importer. These Manure Export Sheets are available from the county conservation district or the State Conservation Commission. Computer generated forms other than the manure export sheet may be used if they contain the same information as, and are reasonably similar in format to, the forms available from the State Conservation Commission or the conservation district.
 - 7) Records relating to the export of manure shall be prepared by the exporter in accordance with the following requirements of the Nutrient and Odor Management Act regulations:
 - a) A Manure Export Sheet shall be used to document all manure exports for their records
 - A copy of the Manure Export Sheet shall be provided to the importer
 - A copy of the Manure Export Sheet shall be retained on site by the exporter
 - b) When the exporter (or someone working for, or contracted by the exporter) applies the exported manure, the exporter shall maintain the following exported manure records:
 - Application dates, areas, rates and methods
 - c) Records shall be maintained by the exporter for a minimum of 3 years
 - d) A manure export informational packet (as supplied by the conservation district or State Conservation Commission) shall be provided to the importer by the time of the manure export. This information only needs to be provided once to the importer.
The manure export informational packet must include the following:
 - i. Exported Manure Informational Packet Guidance Sheet
 - ii. Nutrient Management Planning an Overview (Agronomy Facts 60)
 - iii. Manure Management for Environmental Protection
 - iv. Land Application of Manure- A supplement to the Manure Management Manual Plan Guidance
 - v. Manure Export Sheet
 - vi. Manure Transfer Summary Sheets
 - vii. Manure Field Stacking Requirements Fact Sheet
 - 8) Where applicable, the importer shall properly store manure received from the exporter in accordance with the provisions of the Manure Management Manual and the Pa Technical Guide and shall not cause contamination of surface or ground water. This shall include manure stacked in application fields which may not be retained in fields for > 120 days unless covered or otherwise protected .
 - 9) Manure received by the importer shall be applied to the land at the rate(s) and method(s) provided in the attached "Nutrient Balance Sheet(s)", or in accordance with a Nutrient Management Plan approved for the importing operation. If the importer wishes to change the lands used for imported manure, the nutrient balance sheet must be revised to reflect the changes and be submitted to the conservation district or State Conservation Commission (and DEP if the exporter is a CAFO) prior to implementing the changes.
 - 10) The importer shall comply with applicable manure application setbacks for the imported manure, as outlined in the Nutrient Balance Sheet map(s).
 - 11) For any lands not owned by the importer where the manure will be applied (i.e., rented lands), the importer hereby confirms that the importer has the authority to apply manure on those lands.

12) This agreement shall remain in full effect unless terminated by either party upon thirty days prior written notice to the other party. If this agreement is terminated, the exporter shall notify the county conservation district office that approved their nutrient management plan, of the termination.

Exporter Signature, Name and Date

Neal Zimmerman (signature)
NEAL ZIMMERMAN (name)
8/9/2018 (date)

Importer Signature, Name and Date

Lloyd B. Zimmerman (signature)
LLOYD B. ZIMMERMAN (name)
8/9/2018 (date)

Nutrient Balance Sheet

Prepared for

2413 Snyderotwn Road, Danville, Pa 17821

570-850-9275

Lloyd Zimmerman, Nevin Zimmerman, Merle Zimmerman

Prepared by

Darren Shenk

MB2-1827

3050 Yellow Goose Rd Lancaster Pa 17601

717-393-2176



Nutrient Management Specialist or Broker 2 Signature

Date of Development

August 9, 2018

Exporter Information

Neal Zimmerman

10 Patton Road Danville, PA 17821

County of Origin

Northumberland

Nutrient Balance Worksheet Appendices

The following appendices need to accompany the Nutrient Balance Worksheets if applicable:

- Maps of fields where manure is to applied including required manure application setbacks.
- Completed P-Index spreadsheet and Winter Matrix for each crop management unit (if using Manure Plan Basis: Option 3)

Nutrient Balance Sheet Summary

Importing Farm: Lloyd Zimmerman, Nevin Zimmerman, Merle Zimmerman

Whole Farm Note: Neal Zimmerman broiler manure

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--|---|-------|-------------------------------|--------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| Corn Grain Spring | Campbell 1A-9E, Knoebie Farm 1A, 7 & 9-16, Rushtown 1-4, Hess 1-6 | 268.7 | Corn for Grain | Broiler | Spring | Spring Spring or summer utilization-Incorporation within 5-7 days | 5 tons/A | 0 | 0 | 0 | 10 | 0 | 0 | 4 | -130 | -162 |
| Corn Grain after soybeans Spring | Campbell 1A-9E, Knoebie Farm 1A, 7 & 9-16, Rushtown 1-4, Hess 1-6 | 268.7 | Corn for Grain | Broiler | Spring | Spring Spring or summer utilization-Incorporation within 5-7 days | 3 tons/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | -56 | -81 |
| Corn Stage Spring | Campbell 1A-9E, Knoebie Farm 1A, 7 & 9-16, Rushtown 1-4, Hess 1-6 | 268.7 | Corn for Stage | Broiler | Spring | Spring Spring or summer utilization-Incorporation within 5-7 days | 5 tons/A | 0 | 0 | 0 | 10 | 0 | 0 | 4 | -106 | -44 |
| Corn Stage after Afafa Spring | Campbell 1A-9E, Knoebie Farm 1A, 7 & 9-16, Rushtown 1-4, Hess 1-6 | 268.7 | Corn for Stage | Broiler | Spring | Spring Spring or summer utilization-Incorporation within 5-7 days | 3 tons/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | -32 | 37 |
| Small Grain Stage/Corn Stage double Crop Early Fall/Spring | Campbell 1A-9E, Knoebie Farm 1A, 7 & 9-16, Rushtown 1-4, Hess 1-6 | 268.7 | Small Grain Stage | Broiler | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system. Incorporated after 7 days or none | 4 tons/A | 0 | 0 | 0 | 50 | 0 | 0 | 4 | -107 | -8 |
| Small Grain Stage/Corn Stage double Crop Early Fall/Spring | Campbell 1A-9E, Knoebie Farm 1A, 7 & 9-16, Rushtown 1-4, Hess 1-6 | 268.7 | Corn for Stage | Broiler | Spring | Spring Spring or summer utilization-Incorporation after 7 days or none | 4 tons/A | 0 | 0 | 0 | 40 | 0 | 0 | 2 | -176 | -12 |
| Soybeans with Manure | Campbell 1A-9E, Knoebie Farm 1A, 7 & 9-16, Rushtown 1-4, Hess 1-6 | 268.7 | Soybeans with Manure | Broiler | Spring | Spring Spring or summer utilization-Incorporation within 5-7 days | 4 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -109 | -108 |
| Grass hay | Campbell 1A-9E, Knoebie Farm 1A, 7 & 9-16, Rushtown 1-4, Hess 1-6 | 268.7 | Established Mixed Grasses | Broiler | Early Fall | Early Fall: Summer utilization with cover crop used as green manure. Incorporated after 7 days or none | 4 tons/A | 0 | 0 | 0 | 225 | 0 | 0 | 3 | -59 | 136 |
| Afafa with manure | Campbell 1A-9E, Knoebie Farm 1A, 7 & 9-16, Rushtown 1-4, Hess 1-6 | 268.7 | Established Afafa with Manure | Broiler | Early Fall | Early Fall: Summer utilization with cover crop used as green manure. Incorporated after 7 days or none | 4 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -59 | 136 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|---|--------------------------------|-------|-------------------|--------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| Small Grain Stage/Corn Stage double Crop Winter | Rushtown 1,3,4, Hess 2,3,4,5,6 | 43.9 | Small Grain Stage | Broiler | Winter | Winter: Early Spring Utilization: Small grains and established grass or legume hay | 2 tons/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -32 | 74 |
| Small Grain Stage/Corn Stage double Crop Spring | Rushtown 1,3,4, Hess 2,3,4,5,6 | 43.9 | Corn for Stage | Broiler | Spring | Spring: Spring or summer utilization-incorporation after 7 days or none | 2 tons/A | 0 | 0 | 0 | 55 | 0 | 0 | 3 | | |
| NZ Corn Grain Fall | NZ 1-4 | 50.7 | Corn for Grain | Broiler | Early Fall | Early Fall: Summer utilization with no cover crop. All methods of incorporation | 2 tons/A | 0 | 0 | 0 | 45 | 0 | 0 | 2 | -18 | -40 |
| NZ Corn Grain Spring | NZ 1-4 | 50.7 | Corn for Grain | Broiler | Spring | Spring: Spring or summer utilization-incorporation within 5-7 days | 2 tons/A | 0 | 0 | 0 | 25 | 0 | 0 | 3 | -18 | -40 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NBS Summary Notes

Importing Farm: Lloyd Zimmerman, Nevin Zimmerman, Merle Zimmerman

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|----------------------------------|----------------|--------------|--------------------------------------|--|-------|
| Corn Grain Spring | Corn for Grain | Broiler | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | |
| Corn Grain after soybeans Spring | Corn for Grain | Broiler | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | |
| Corn Stage Spring | Corn for Stage | Broiler | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | |
| Corn Stage after A/ya'a Spring | Corn for Stage | Broiler | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | |

| CMUFieldID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--|--------------------------------|--------------|---|---|-------|
| Small Grain Silage/Corn Silage double Crop Early Fall/Spring | Small Grain Silage | Broiler | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | |
| Small Grain Silage/Corn Silage double Crop Early Fall/Spring | Corn for Silage | Broiler | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | |
| Soybeans with Manure | Soybeans with Manure | Broiler | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | |
| Grass hay | Established Mixed Grasses | Broiler | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | |
| Alfafa with manure | Established Alfafa with Manure | Broiler | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--|-------------------|--------------|--------------------------------------|--|--|
| Small Grain Stags/Corn Stags double Crop Winter | Small Grain Stags | Broiler | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | 25% cover on fields with winter application, observe 150 ft stream setback and 100 ft well setback |
| Small Grain Stags/Corn Stags double Crop Spring | Corn for Stags | Broiler | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | |
| NZ Corn Grain Fall | Corn for Grain | Broiler | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | |
| NZ Corn Grain Spring | Corn for Grain | Broiler | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | |

Manure Group Information

| | |
|---|---------------------|
| Appendix 3 Manure Group Information | Broiler |
| Manure Report Date (note if averaging several reports) | 7/11/2018 (average) |
| Laboratory Name | Ag Essentials |
| Manure Type | Poultry |
| Manure Unit (lbs/ton or 1000 gal) | lb/ton |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 60.87 |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 8.83 |
| Total Organic N (lbs/ton or 1000 gal) | 52.04 |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 37.23 |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 40.69 |
| Percent Solids | 63.69 |
| PSC Value (analytical or book value) | 0.80 |

| Nutrient Balance Sheets | | Corn Grain Spring | | | Corn Grain after soybeans Spring | | | Corn Stage Spring | | | Corn Stage after A/a/a/a Spring | | | Small Grain Stage/Corn Stage double Crop Early Fall/Spring | | | Small Grain Stage/Corn Stage double Crop Early Fall/Spring | | |
|--|--|---|-------|--------|---|-------|--------|---|-------|--------|---|-------|--------|---|-----------------------------------|--------|---|-------|--------|
| Crop Group Identification | | Corn Grain Spring | | | Corn Grain after soybeans Spring | | | Corn Stage Spring | | | Corn Stage after A/a/a/a Spring | | | Small Grain Stage/Corn Stage double Crop Early Fall/Spring | | | Small Grain Stage/Corn Stage double Crop Early Fall/Spring | | |
| Fields | | 283.7 | | | 283.7 | | | 283.7 | | | 283.7 | | | 283.7 | | | 283.7 | | |
| Acres | | 283.7 | | | 283.7 | | | 283.7 | | | 283.7 | | | 283.7 | | | 283.7 | | |
| NBS Option | | Option 2 Nitrogen Requirement | | | Option 2 Nitrogen Requirement | | | Option 2 Nitrogen Requirement | | | Option 2 Nitrogen Requirement | | | Option 2 Nitrogen Requirement | | | Option 2 Nitrogen Requirement | | |
| P Balancing | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for P1 | | 121 | | | 121 | | | 121 | | | 121 | | | 121 | | | 121 | | |
| P Index Part A Evaluation | | P Index not Required | | | P Index not Required | | | P Index not Required | | | P Index not Required | | | P Index not Required | | | P Index not Required | | |
| Part A Result | | Corn for Grain | | | Corn for Grain | | | Corn for Stage | | | Corn for Stage | | | Small Grain Stage | | | Corn for Stage | | |
| Crop | | 140 bu/A | | | 140 bu/A | | | 20 ton/A | | | 20 ton/A | | | 6 ton/A | | | 20 ton/A | | |
| Planned Yield | | 140 bu/A | | | 140 bu/A | | | 20 ton/A | | | 20 ton/A | | | 6 ton/A | | | 20 ton/A | | |
| Crop Removal Recommendations (Lb/A) | | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 |
| Soil Test Recommendation (b/A) | | 140 | 56 | 42 | 140 | 56 | 42 | 140 | 60 | 160 | 140 | 60 | 160 | 102 | 42 | 156 | 140 | 60 | 160 |
| Other Nutrients Applied (b/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | 0 | | | 0 | | | 0 | | | 0 | | | [37] | Winter Double Crop | 37 | Summer Double Crop | | |
| Double Crop Carryover N (b/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 11 | Continuously - Winter Double Crop | 24 | Continuously - Summer Double Crop | | |
| Manure History Description Residual Manure N (b/A) | | 35 | | | 35 | | | 35 | | | 35 | | | 0 | No Previous Year Legume | 0 | No Previous Year Legume | | |
| Legume History Description Residual Legume N (b/A) | | 0 | | | 40 | | | 0 | | | 40 | | | 0 | 1st yr. after a/a/a/a <25% stand | 0 | No Previous Year Legume | | |
| Net Nutrients Required (b/A) | | 105 | 56 | 42 | 65 | 56 | 42 | 105 | 60 | 160 | 65 | 60 | 160 | 91 | 42 | 156 | 79 | -27 | 152 |
| Manure Group | | Broiler | | | Broiler | | | Broiler | | | Broiler | | | Broiler | | | Broiler | | |
| Units | | b/ton | | | b/ton | | | b/ton | | | b/ton | | | b/ton | | | b/ton | | |
| Manure Nutrient Content (b/ton or 1000 gal) | | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 |
| Application Season/Management (Incorporation, cover crops, etc.) | | Spring, Spring or summer utilization- Incorporation within 5-7 days | | | Spring, Spring or summer utilization- Incorporation within 5-7 days | | | Spring, Spring or summer utilization- Incorporation within 5-7 days | | | Spring, Spring or summer utilization- Incorporation within 5-7 days | | | Early Fall, Early spring utilization and winter crop in double crop system. Incorporated after 7 days or none | | | Spring, Spring or summer utilization- Incorporation after 7 days or none | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| P Index Application Method | | 6 tons/A | | | 4 tons/A | | | 6 tons/A | | | 4 tons/A | | | 10 tons/A | | | 9 tons/A | | |
| N Balanced Manure Rate (ton, gal/A) | | 2 tons/A | | | 2 tons/A | | | 2 tons/A | | | 2 tons/A | | | 3 tons/A | | | 0 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; if required by P Index) | | Crop P Removal (b/A) 56.0 | | | Crop P Removal (b/A) 56.0 | | | Crop P Removal (b/A) 60.0 | | | Crop P Removal (b/A) 60.0 | | | Crop P Removal (b/A) 122.0 | | | Crop P Removal (b/A) 0.0 | | |
| P Index Value | | 5 tons/A | | | 3 tons/A | | | 5 tons/A | | | 3 tons/A | | | 4 tons/A | | | 4 tons/A | | |
| Planned Manure Rate (ton or gal/A) | | 5 tons/A | | | 3 tons/A | | | 5 tons/A | | | 3 tons/A | | | 4 tons/A | | | 4 tons/A | | |
| Nutrients Applied at Planned Manure Rate (b/A) | | 91 | 106 | 204 | 55 | 112 | 123 | 91 | 106 | 204 | 55 | 112 | 123 | 37 | 149 | 164 | 37 | 149 | 164 |
| Nutrient Balance after Manure | | 14 | -130 | -162 | 10 | -56 | -81 | 14 | -106 | -44 | 10 | -32 | 37 | 54 | -107 | -8 | 42 | -176 | -12 |
| Supplemental Fertilizer (b/A) | | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 50 | 0 | 0 | 40 | 0 | 0 |
| P Index Application Method | | 4 | | | 0 | | | 4 | | | 0 | | | 4 | | | 2 | | |
| Final Nutrient Balance (b/A) | | 4 | -130 | -162 | 0 | -56 | -81 | 4 | -106 | -44 | 0 | -32 | 37 | 4 | -107 | -8 | 2 | -176 | -12 |
| Multiple Application | | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |
| Soil test or Crop Removal | | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | Soybeans with Manure | | | Grass hay | | | A/A/a with manure | | | Small Grain Stages/Corn Stages double Crop Winter | | | Small Grain Stages/Corn Stages double Crop Spring | | | NZ Corn Grain Fall | | |
|---|--|-------|-------|--|-------|-------|--|-------|-------|--|-------|-------|--|-------|-------|--|-------|-------|
| Crop Group Identification | Soybeans | | | Grass Hay | | | A/A/a | | | Small Grain Stages/Corn Stages | | | Small Grain Stages/Corn Stages | | | NZ Corn Grain | | |
| Fields | 283.7 | | | 283.7 | | | 283.7 | | | 43.9 | | | 43.9 | | | 50.7 | | |
| Acres | 283.7 | | | 283.7 | | | 283.7 | | | 43.9 | | | 43.9 | | | 50.7 | | |
| NBS Option | Option 2 Nitrogen Requirement | | | Option 2 Nitrogen Requirement | | | Option 2 Nitrogen Requirement | | | Option 3 P Index Must be Completed | | | Option 2 Nitrogen Requirement | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Method 3 Soil Test - P | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| For Option 2 enter maximum Soil Test | 121 | | | 121 | | | 121 | | | 121 | | | 121 | | | 133 | | |
| For Option 3 enter soil test for PI | | | | | | | | | | | | | | | | | | |
| P Index Part A Evaluation | P Index not Required | | | P Index not Required | | | P Index not Required | | | <150lb Winter | | | Farm Mgmt Change | | | | | |
| Part A Result | Soybeans with Manure | | | Established Mixed Grasses | | | Established A/A/a with Manure | | | Part B | | | Part B | | | | | |
| Crop | Soybeans with Manure | | | Established Mixed Grasses | | | Established A/A/a with Manure | | | Small Grain Stages | | | Corn for Stages | | | Corn for Grain | | |
| Planned Yield | 40 bu/A | | | 6 ton/A | | | 6 ton/A | | | 6 ton/A | | | 20 ton/A | | | 140 bu/A | | |
| Crop Removal Recommendations (lb/A) | N | P205 | K2O | N | P205 | K2O | N | P205 | K2O | N | P205 | K2O | N | P205 | K2O | N | P205 | K2O |
| Soil Test Recommendation (t/A) | 128 | 40 | 56 | 300 | 90 | 300 | 300 | 90 | 300 | 102 | 42 | 156 | 140 | 60 | 160 | 140 | 56 | 42 |
| Other Nutrients Applied (t/A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Net Nutrients Required (t/A) | 93 | 40 | 56 | 265 | 90 | 300 | 265 | 90 | 300 | 91 | 42 | 156 | 116 | | | 65 | 56 | 42 |
| Manure Group | Broiler | | | Broiler | | | Broiler | | | Broiler | | | Broiler | | | Broiler | | |
| Units | t/ton | | | t/ton | | | t/ton | | | t/ton | | | t/ton | | | t/ton | | |
| Manure Nutrient Content (lb/ton or 1000 gal) | N | P205 | K2O | N | P205 | K2O | N | P205 | K2O | N | P205 | K2O | N | P205 | K2O | N | P205 | K2O |
| Application Season, Management (Incorporation, cover crops, etc.) | 60.87 | 37.23 | 40.69 | 60.87 | 37.23 | 40.69 | 60.87 | 37.23 | 40.69 | 60.87 | 37.23 | 40.69 | 60.87 | 37.23 | 40.69 | 60.87 | 37.23 | 40.69 |
| Availability Factors (Total N or NH4-N & Organic N) | 0.30 | | | 0.15 | | | 0.15 | | | 0.50 | | | 0.15 | | | 0.15 | | |
| P Index Application Method | Spring Spring or summer utilization - Incorporation within 5-7 days | | | Early Fall Summer utilization with cover crop used as green manure - Incorporated after 7 days or none | | | Early Fall Summer utilization with cover crop used as green manure - Incorporated after 7 days or none | | | Winter Early Spring Utilization - Small grains and established grass or legume hay | | | Spring Spring or summer utilization - Incorporation after 7 days or none | | | Early Fall Summer utilization with no cover crop - All methods of incorporation | | |
| Planned Manure Rate (ton or gal/A) | 5 tons/A | | | 29 tons/A | | | 29 tons/A | | | 3 tons/A | | | 13 tons/A | | | 7 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A) (if required by P Index) | 1 tons/A | | | 2 tons/A | | | 2 tons/A | | | 1 tons/A | | | 2 tons/A | | | 2 tons/A | | |
| P Index Value | Crop P Removal (t/A) 40.0 | | | Crop P Removal (t/A) 50.0 | | | Crop P Removal (t/A) 50.0 | | | Crop P Removal (t/A) 42.0 | | | Crop P Removal (t/A) 60.0 | | | Crop P Removal (t/A) 56.0 | | |
| Planned Manure Rate (ton or gal/A) | 4 tons/A | | | 4 tons/A | | | 4 tons/A | | | 71 | | | 2 tons/A | | | 73 | | |
| Nutrients Applied at Planned Manure Rate (t/A) | 73 | 149 | 164 | 37 | 149 | 164 | 37 | 149 | 164 | 61 | 74 | 82 | 18 | 74 | 82 | 18 | 74 | 82 |
| Nutrient Balance after Manure | 0 | -109 | -108 | 228 | -59 | 136 | 0 | -59 | 136 | 30 | -32 | 74 | 63 | | | 47 | -18 | -40 |
| Supplemental Fertilizer (t/A) | 0 | 0 | 0 | 225 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 55 | 0 | 0 | 45 | 0 | 0 |
| Final Nutrient Balance (t/A) | 0 | -109 | -108 | 3 | -59 | 136 | 0 | -59 | 136 | 0 | -32 | 74 | 3 | | | 2 | -18 | -40 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P205 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | NZ Corn Grain Spring | | |
|--|---|----------------------------|--------|--|
| Crop Group Identification | NZ 1-4 | | | |
| Fields | 59.7 | | | |
| Acres | 59.7 | | | |
| NBS Option | Option 3 P Index Must be Completed | | | |
| P Banking | | | | |
| Match 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | |
| | 133 | | | |
| P Index Part A Evaluation | Farm Mgmt Change | | | |
| Part A Result | Part B | | | |
| Crop | Corn for Grain | | | |
| Planned Yield | 140 bu/A | | | |
| Crop Removal Recommendations (lb/A) | N | P2O5 | K2O | |
| | 140 | 56 | 42 | |
| Soil Test Recommendation (lb/A) | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | |
| P Index Application Method | | | | |
| Double Crop Carry Over N (lb/A) | 0 | | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | |
| Legume History Description Residual Legume N (lb/A) | 40 | Soybeans, 40 bu/A | | |
| Net Nutrients Required (lb/A) | 65 | 56 | 42 | |
| Manure Group | Broiler | | | |
| Units | t/ton | | | |
| Manure Nutrient Content (lb/ton or 1000 gal) | N | P2O5 | K2O | |
| | 69.87 | 37.23 | 40.69 | |
| Application Season/ Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation within 5-7 days | | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | |
| | 0.30 | | | |
| P Index Application Method | April - Oct. (No incorp or incorp > 1 wk) | | | |
| N Balanced Manure Rate (ton, gal/A) | 4 tons/A | | | |
| P Removal Balance Manure Rate (ton or gal/A; if required by P Index) | 2 tons/A | | | |
| | Crop P Removal (lb/A) 56.0 | | | |
| P Index Value | 73 | | | |
| Planned Manure Rate (ton or gal/A) | 2 tons/A | | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 37 | 74 | 62 | |
| Nutrient Balance after Manure | 28 | -18 | -40 | |
| Supplemental Fertilizer (lb/A) | 25 | 0 | 0 | |
| P Index Application Method | | | | |
| Final Nutrient Balance (lb/A) | 3 | -18 | -40 | |
| Multiple Application | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | |

Phosphorus Index

[Go to NBS Input](#)

[Go to NBS Index](#)

Pennsylvania P Index Version 2

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | CMU/Field ID | Small Grain Silage/Corn Silage double Crop Winter |
|--|--|--|--|---|--|--|---|
| Is the CMU in a Special Protection watershed? A significant farm management change as defined by Act 387 Soil Test Mehlich 3 P greater than 200 ppm P? Contributing Distance from CMU to receiving water < 150 ft.? Is winter manure application planned for this field? | | Is the CMU in a Special Protection watershed? Is there a significant farm management change as defined by Act 387? Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) Is the Contributing Distance from this CMU to receiving water less than 150 ft.? Is winter manure application planned for this field? | | | | If the answer is Yes to any of these questions, Part B must be used. | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) Soil Test Rating = 0.20 * Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | 121 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Sister or other) | | Fertilizer P (b P2O5/acre) | | | | | 24 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated < 1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated > 1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | 0 |
| SUPPLEMENTAL P FERTILIZER | | Fertilizer P (b P2O5/acre) | | | | 0 | |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated < 1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated > 1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | | 0 |
| MANURE P RATE | | Manure P (b P2O5/acre) | | | | 74 | |
| MANURE APPLICATION METHOD ³ | | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated < 1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated > 1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | 0.8 |
| P SOURCE COEFFICIENT ³ | | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | | 47 |
| Source Factor Sum | | | | | | | 71 |
| PART B: TRANSPORT FACTORS | | Soil Loss (t/acre/yr) | | | | | 2 |
| EROSION | | | | | | | |
| RUNOFF POTENTIAL | | 0 Drainage Class is Excessive | 2 Drainage Class is Somewhat Excessive | 4 Drainage Class is Well/Moderately Well | 6 Drainage Class is Somewhat Poorly | 8 Drainage Class is Poorly/Very Poorly | 4 |
| SUBSURFACE DRAINAGE | | 0 None | | 1 Random | | 2 Patterned | 0 |
| CONTRIBUTING DISTANCE | | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 8 < 100 ft. | 6 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | | 12 |
| MODIFIED CONNECTIVITY | | 0.65 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | 1.0 |
| Transport Sum x Modified Connectivity / 24 | | | | | | | 0.59 |
| P Index Value = 2 x Source x Transport | | | | | | | 71 |

Low: 59 or less
Nitrogen based management

Medium: 60 to 79
Nitrogen based management

High: 80 to 99
Phosphorus limited to crop removal

Very High: 100 or greater
No Phosphorus applied

1. OR rapidly permeable soil near a stream
2. "g" factor does not apply to fields receiving manure with a 35 ft. buffer.
3. Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | NZ Corn Grain Fall | NZ Corn Grain Spring |
|--|--------------------|----------------------|
| Is the CMU in a Special Protection watershed? | No | No |
| A significant farm management change as defined by Act 38? | Yes | Yes |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 133 | 133 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No |
| Is winter manure application planned for this field? | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 133 | 133 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 27 | 27 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or cover) | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 |
| MANURE P RATE | 74 | 74 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 39 | 39 |
| Source Factor Sum | 63 | 63 |
| PART B: TRANSPORT FACTORS | 4 | 4 |
| EROSION | 4 | 4 |
| RUNOFF POTENTIAL | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 |
| CONTRIBUTING DISTANCE | 6 | 6 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 14 | 14 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.58 | 0.58 |
| P Index Value = 2 x Source x Transport | 73 | 73 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 "B" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspond

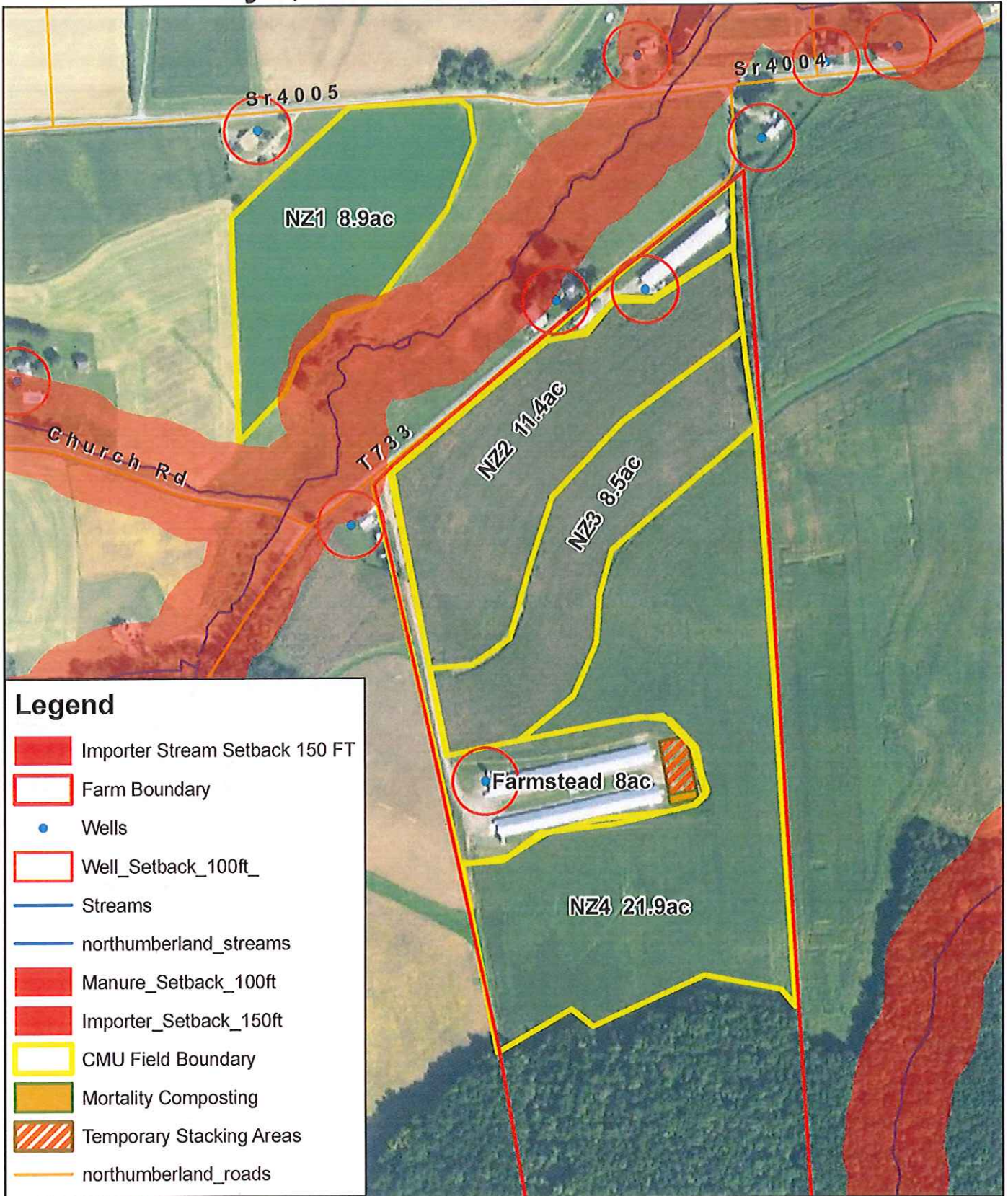
Appendix 1

Operation Maps

Maps (or aerial photographs) required in Nutrient Balance Sheets must identify: road and road names adjacent to and within the operation; field identification, boundaries and acreage; manure application setback areas and vegetated buffers and associated landscape features (streams and other water bodies, sinkholes, and active water wells or springs); and location of in-field manure stacking areas (including each site in stacking area rotation).

Importer Map

Lloyd, Nevin & Merle Zimmerman



Campbell Farm - Aerial Map

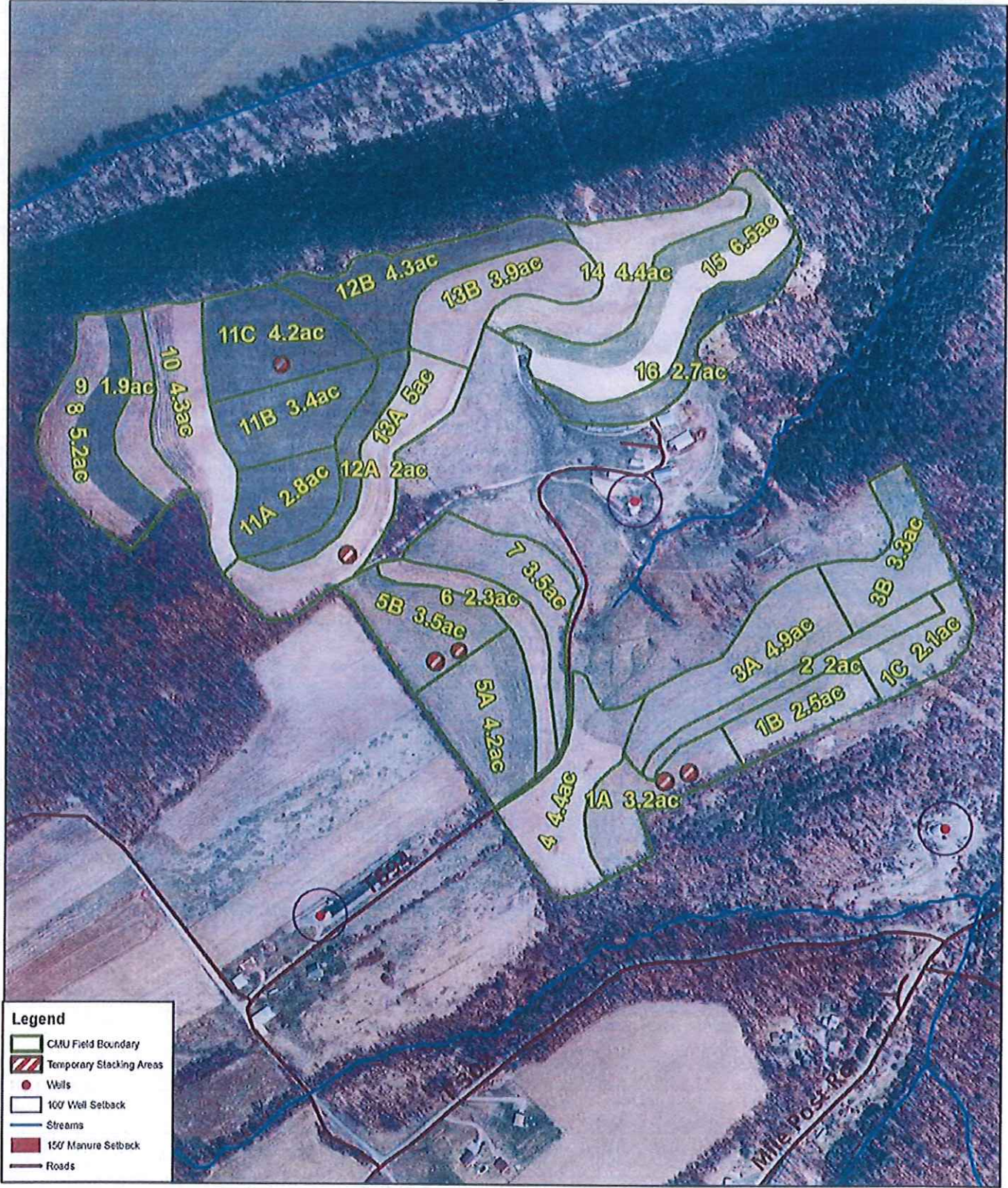
Importer - Lloyd Zimmerman



1 inch = 700 feet N
W —+— E
S

Knoebel Farm - Aerial Map

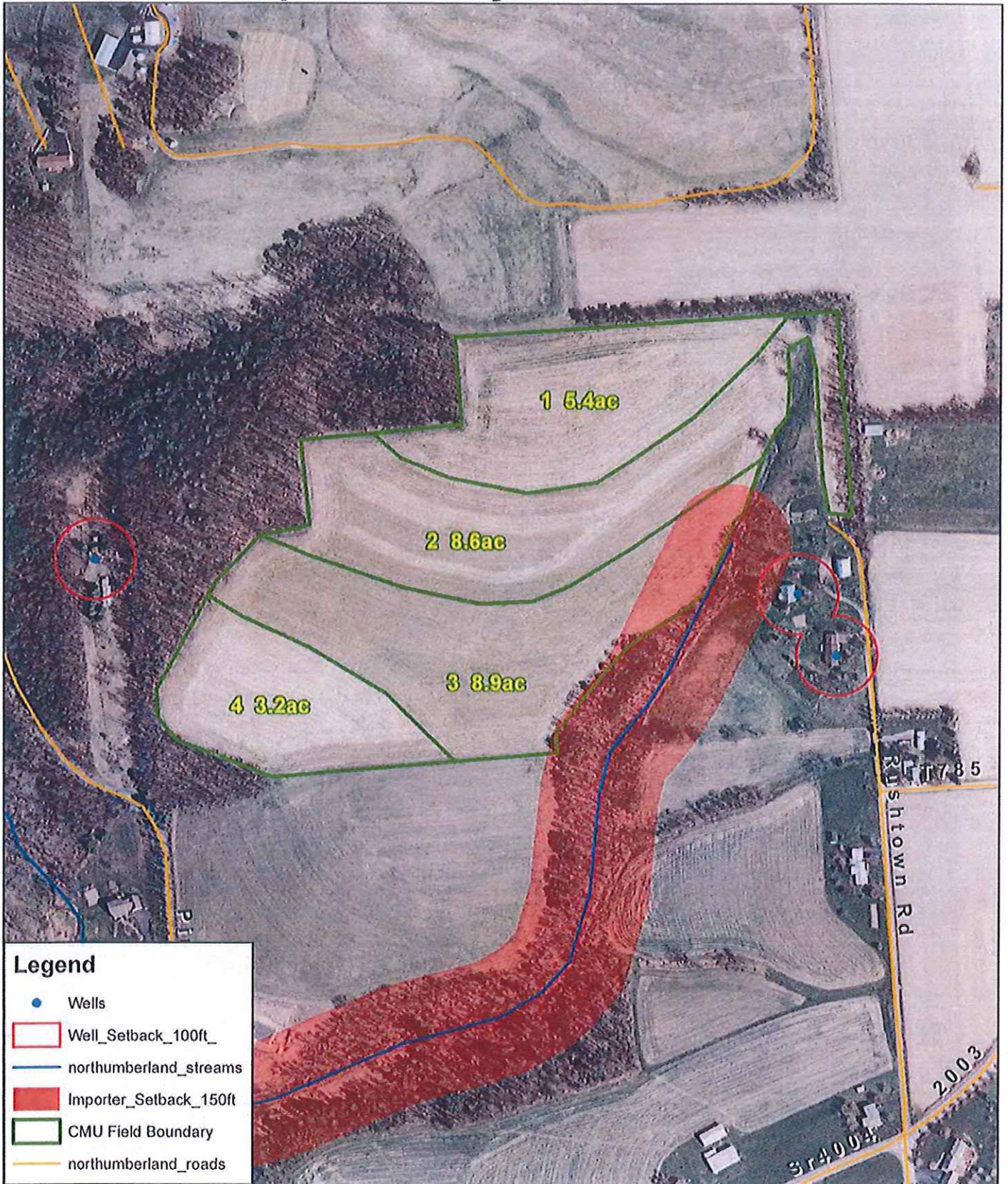
Importer - Lloyd Zimmerman



1 inch = 500 feet

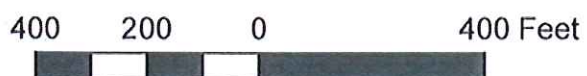
Rushtown Farm - Field Map

Importer - Lloyd Zimmerman



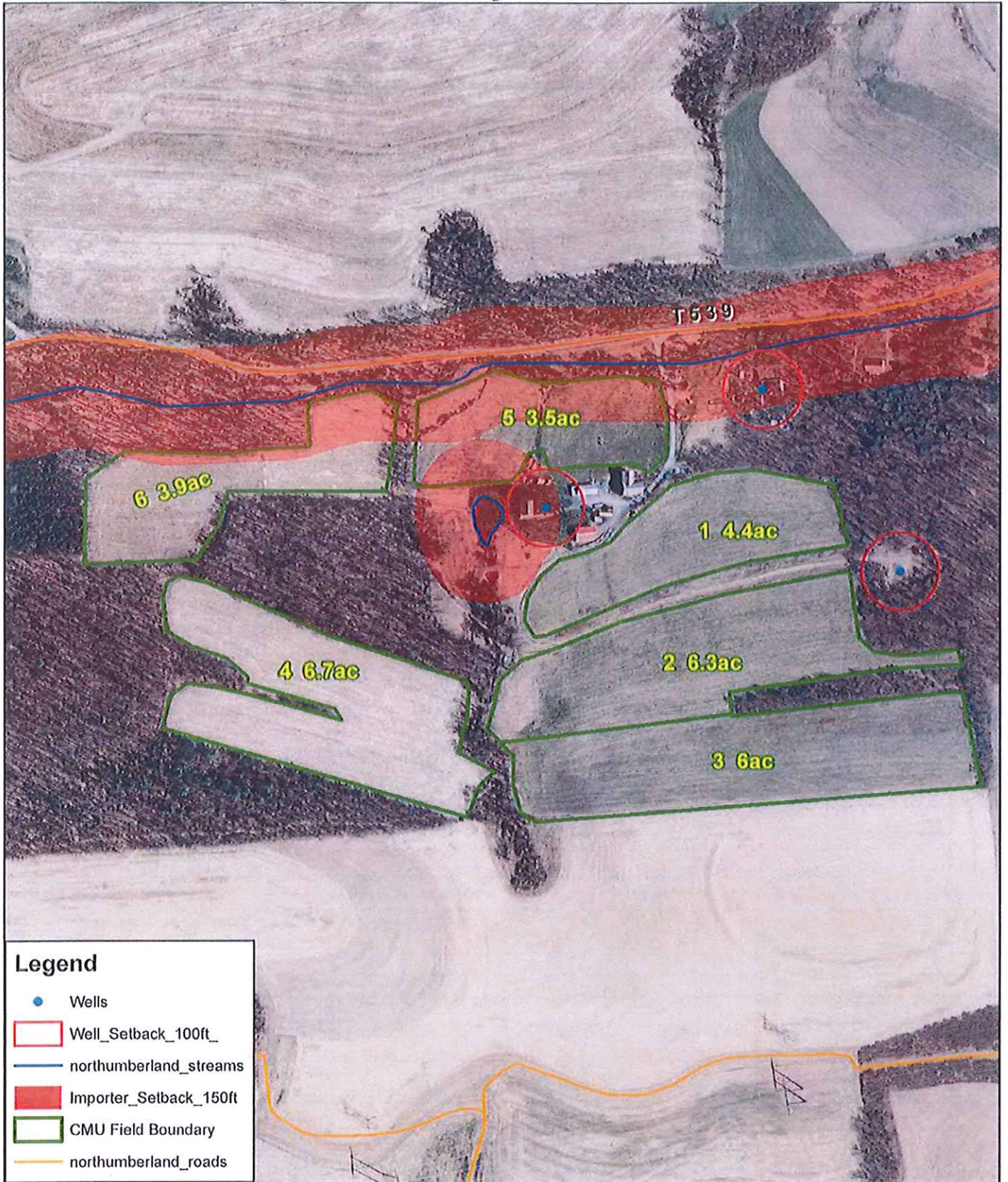
Legend

- Wells
- Well_Setback_100ft_
- northumberland_streams
- Importer_Setback_150ft
- CMU Field Boundary
- northumberland_roads



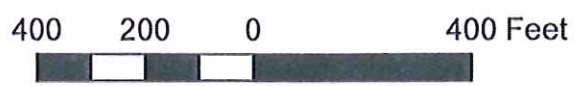
HessFarm - Field Map

Importer - Lloyd Zimmerman



Legend

- Wells
- Well_Setback_100ft_
- northumberland_streams
- Importer_Selback_150ft
- CMU Field Boundary
- northumberland_roads

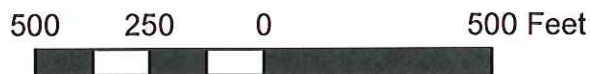
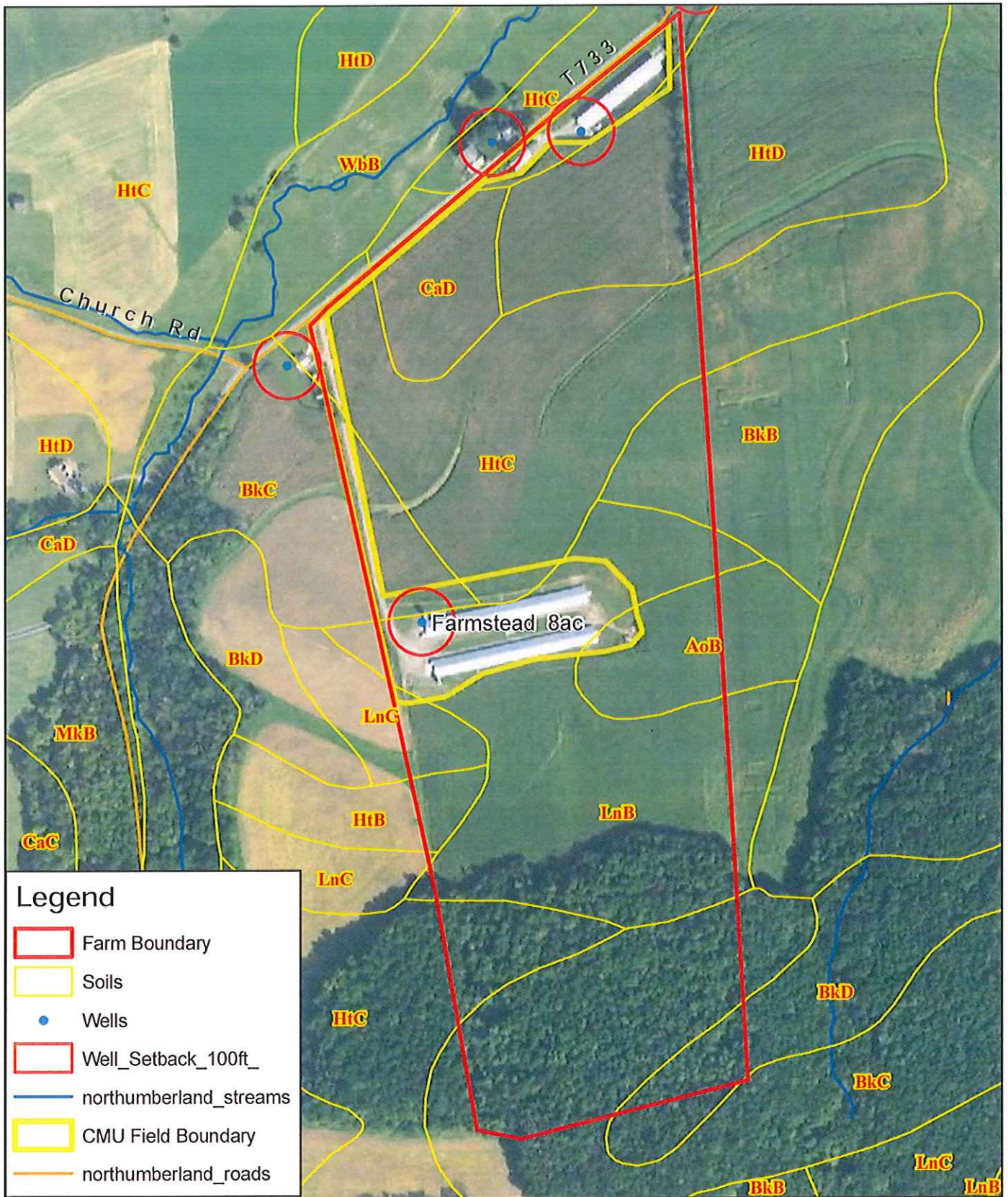


Appendix 9

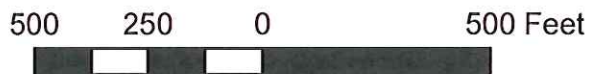
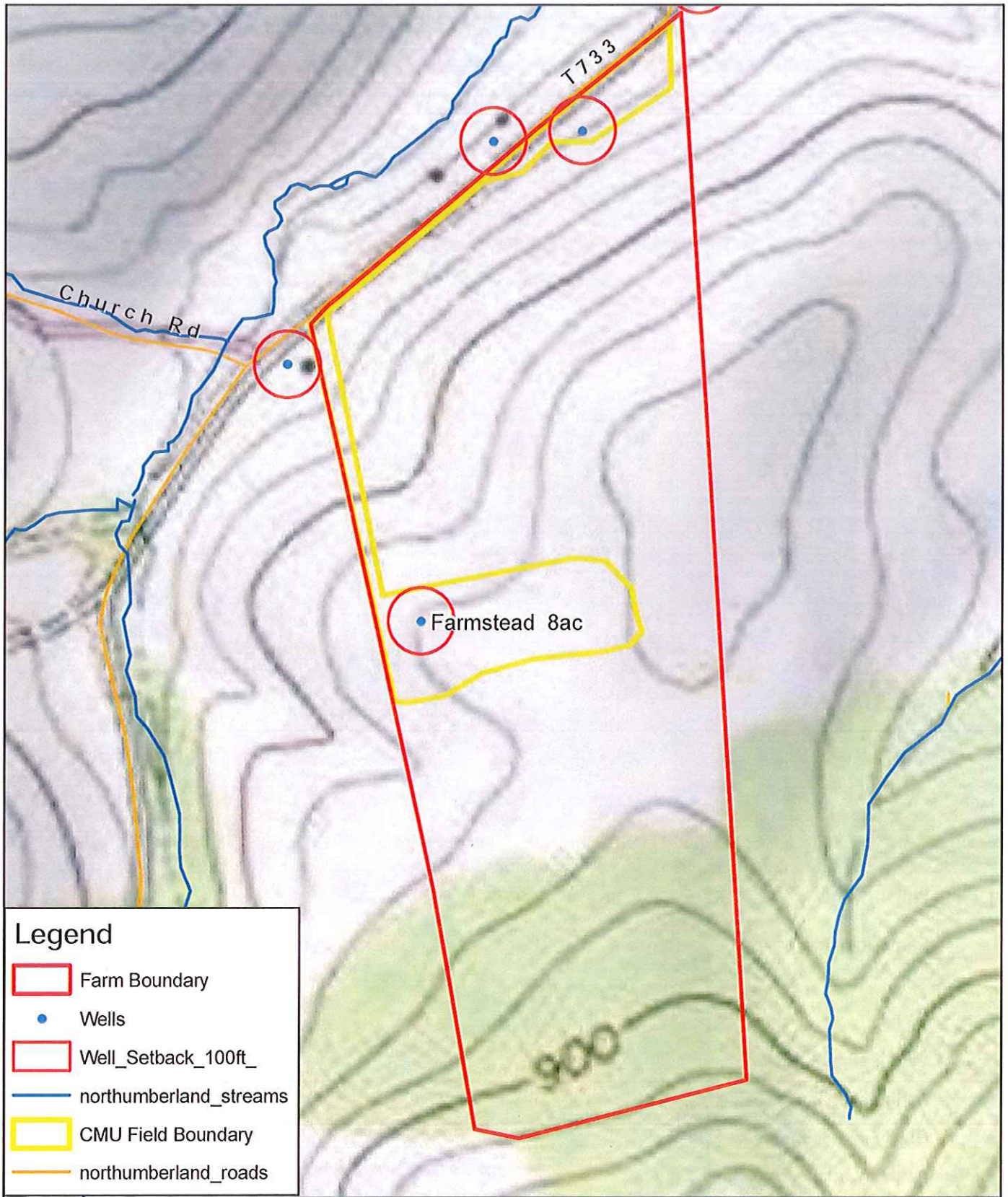
Operation Maps

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Topographic Map and Soils Map** must be included here. The Topographic map must be drawn to scale and identify the land included in the plan with operation boundaries. The Soils Map must include the field identification and boundaries, soil types and slopes with soil legend. Adding P Index lines can be helpful on the Topographic or Soils map but are not required. The Operator Management Map must be included in the Nutrient Management Plan Summary.

Soil Map Neal Zimmerman



Topo Map Neal Zimmerman



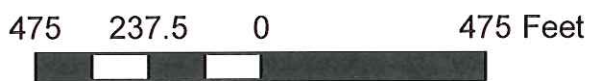
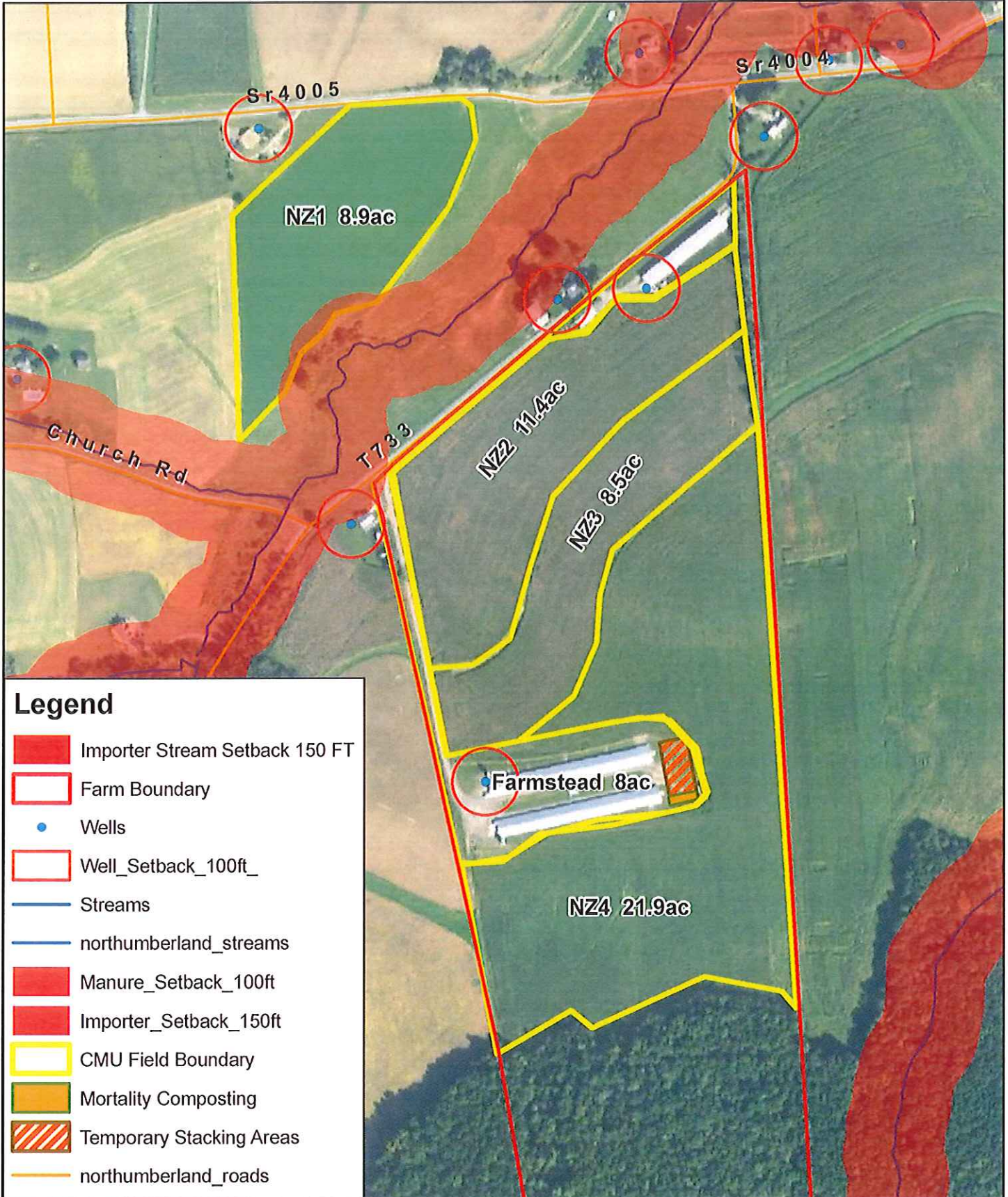
Supporting Information & Documentation

Includes if applicable the Rainfall Additions Worksheet, Winter Application Matrix, Residual N Calculation Worksheet and other supplemental worksheets included in the NMP Spreadsheet. Attach information and documentation necessary to support plan content not included elsewhere in the NMP Spreadsheet or appendices. Examples include, but are not limited to, documentation of animal weights if Agronomy Facts 54 is not used, bedding calculations, or calculations for irrigation rates.

| Manure Analysis 5 Year Running Average | | | | | | |
|--|---------------------|---------------------|---------------|---------------|-------------|-------------|
| Manure Average for Crop Years: 2019, 2020, 2021 | Broiler | | | | | |
| | Average | 1 year ago | 2 years ago | 3 years ago | 4 years ago | 5 years ago |
| Manure Report Date | 7/11/2018 (average) | 7/11/2018 (average) | Jan 22 2017 | Dec 15 2015 | | |
| Laboratory Name | Ag Essentials | Ag Essentials | Ag Essentials | Ag Essentials | | |
| Manure Type | Poultry | Poultry | Poultry | Poultry | | |
| Manure Unit (lbs/ton or 1000 gal) | lb/ton | lb/ton | lb/ton | lb/ton | | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 60.87 | 45.60 | 83.10 | 53.70 | | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 8.83 | 11.60 | 5.00 | 9.70 | | |
| Total Organic N (lbs/ton or 1000 gal) | 52.04 | 34.00 | 78.10 | 44.00 | | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 37.23 | 34.40 | 70.70 | 6.59 | | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 40.89 | 42.60 | 57.00 | 23.06 | | |
| Percent Solids | 63.69 | 59.42 | 79.30 | 52.35 | | |
| PSC Value (Enter analytical or book value) | 0.80 | 0.80 | 0.80 | 0.80 | | |

Importer Map

Lloyd, Nevin & Merle Zimmerman



Map Unit Description (Brief, Generated)

Northumberland County, Pennsylvania

[Minor map unit components are excluded from this report]

Map unit: AoB - Allenwood and Washington soils, 3 to 8 percent slopes

Component: Allenwood (50%)

The Allenwood component makes up 50 percent of the map unit. Slopes are 3 to 8 percent. This component is on valley sides, uplands. The parent material consists of old till derived from sedimentary rock. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Washington (30%)

The Washington component makes up 30 percent of the map unit. Slopes are 3 to 8 percent. This component is on uplands, valley sides. The parent material consists of colluvium derived from limestone and/or old glacial drift. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map unit: BkB - Berks shaly silt loam, 3 to 8 percent slopes

Component: Berks (65%)

The Berks component makes up 65 percent of the map unit. Slopes are 3 to 8 percent. This component is on ridges, valleys. The parent material consists of residuum weathered from shale and siltstone. Depth to a root restrictive layer, bedrock, paralithic, is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map unit: BkC - Berks shaly silt loam, 8 to 15 percent slopes

Component: Berks (65%)

The Berks component makes up 65 percent of the map unit. Slopes are 8 to 15 percent. This component is on ridges, valleys. The parent material consists of residuum weathered from shale and siltstone. Depth to a root restrictive layer, bedrock, paralithic, is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Map unit: BkD - Berks shaly silt loam, 15 to 25 percent slopes

Component: Berks (65%)

The Berks component makes up 65 percent of the map unit. Slopes are 15 to 25 percent. This component is on ridges, valleys. The parent material consists of residuum weathered from shale and siltstone. Depth to a root restrictive layer, bedrock, paralithic, is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Map Unit Description (Brief, Generated)

Northumberland County, Pennsylvania

Map unit: CaD - Calvin-Klinesville shaly silt loams, 15 to 25 percent slopes

Component: Calvin (40%)

The Calvin component makes up 40 percent of the map unit. Slopes are 15 to 25 percent. This component is on hillslopes. The parent material consists of residuum weathered from siltstone. Depth to a root restrictive layer, bedrock, paralithic, is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Component: Klinesville (25%)

The Klinesville component makes up 25 percent of the map unit. Slopes are 15 to 25 percent. This component is on ridges, valleys. The parent material consists of residuum weathered from siltstone. Depth to a root restrictive layer, bedrock, lithic, is 10 to 20 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria.

Map unit: H1B - Hartleton channery silt loam, 3 to 8 percent slopes

Component: Hartleton (75%)

The Hartleton component makes up 75 percent of the map unit. Slopes are 3 to 8 percent. This component is on -- Error in Exists On --. The parent material consists of residuum weathered from sandstone and shale. Depth to a root restrictive layer, bedrock, lithic, is 40 to 80 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map unit: H1C - Hartleton channery silt loam, 8 to 15 percent slopes

Component: Hartleton (75%)

The Hartleton component makes up 75 percent of the map unit. Slopes are 8 to 15 percent. This component is on -- Error in Exists On --. The parent material consists of residuum weathered from sandstone and shale. Depth to a root restrictive layer, bedrock, lithic, is 40 to 80 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Map unit: H1D - Hartleton channery silt loam, 15 to 25 percent slopes

Component: Hartleton (75%)

The Hartleton component makes up 75 percent of the map unit. Slopes are 15 to 25 percent. This component is on -- Error in Exists On --. The parent material consists of residuum weathered from sandstone and shale. Depth to a root restrictive layer, bedrock, lithic, is 40 to 80 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Map Unit Description (Brief, Generated)

Northumberland County, Pennsylvania

Map unit: LnB - Leck kill shaly silt loam, 3 to 8 percent slopes

Component: Leck Kill (80%)

The Leck Kill component makes up 80 percent of the map unit. Slopes are 3 to 8 percent. The parent material consists of reddish residuum derived from sedimentary rock. Depth to a root restrictive layer, bedrock, lithic, is 40 to 80 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map unit: LnC - Leck kill shaly silt loam, 8 to 15 percent slopes

Component: Leck Kill (80%)

The Leck Kill component makes up 80 percent of the map unit. Slopes are 8 to 15 percent. This component is on hillslopes. The parent material consists of reddish residuum derived from sedimentary rock. Depth to a root restrictive layer, bedrock, lithic, is 40 to 80 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.



**COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION**

DATE: October 12, 2018

TO: Members
State Conservation Commission

FROM: Larry G Baum
State Conservation Commission

SUBJECT: Nutrient Management Plan Review
John Rishel, Northumberland County, Pennsylvania

Action Requested

Action on a Nutrient Management Plan for the following operation in Northumberland County:

John Rishel
1710 Vincent Avenue,
Watsonstown, PA 17777

Background

I have completed the required review of the subject nutrient management plan listed above. Final corrections to the plan were received at the State Conservation Commission October 12, 2018. As of that date, the plan was considered to be in its final form.

The operation, located in Northumberland County, is considered to be a Concentrated Animal Operation (CAO) under the PA Nutrient and Odor Management Act (Act 38 of 2005).

The Commission is the proper authority to take action on this plan, because Northumberland County Conservation District is not delegated plan review and action responsibilities under the Act 38 program.

A brief description of the operation, concluding with the staff recommendation, is attached. Also attached is a copy of the complete nutrient management plan for the operation.

Thank you for considering this plan for Commission action.

Farm Description

John Rishel NMP, Northumberland County – The John Rishel agricultural operation is a custom heifer raising operation. John Rishel has operational control of Farmstead 1A, Farmstead 2 and Pasture Field P 2 for the horse.

The heifer operation consists of an average: 20 – 3 to 5-month-old calves; 40 - 5 to 8-month-old calves; 40 – 8 to 12-month-old calves; 50 – 12 to 17-month-old heifers; 50 – 17 to 23-month-old heifers, and 2 horses.

Calves and heifers are housed in a barn at Farmstead 2 year-round and do not have access to pasture. Manure from the 20 – 3 to 5-month-old calves is handled as a solid and collected in the barn. Manure from the remaining calves and heifers is handled as a liquid and stored in a 105'x 150'x 12' HDPE lined manure storage pond at Farmstead 2. One horse is kept on pasture Field 1 year-round with access to a barn at Farmstead 1A for feed and water. The other horse is kept in a barn at Farmstead 2 year-round with no access to pasture. Collected horse manure at Farmstead 1 is temporarily stacked outside of the horse barn until it is moved to Farmstead 2 and mixed with the cattle manure or added to the mortality compost pile.

All collected manure is exported to known importers in the spring and fall. Mortalities are composted at Farmstead 2. Mortality compost is mixed with solid cattle manure and exported to known manure importers when needed.

The operation consists of a total of 85 acres of cropland of which 28 acres are typically managed as hay land, 7.9 acres of pasture and 7.9 acres of farmstead. Mr. Rishel rents all 85 acres of owned cropland to Gary Truckenmiller and Mr. Rishel does not have management control of these acres. Mr. Rishel also rents 6.9 acres of pasture, (Field P1) and 0.7 acres' farmstead (Farmstead 1B) to Mervin B Hostetter. Mr. Rishel also does not have operational control of these acres. Mr. Hostetter operates a dairy farm on the rented acres from Mr. Rishel. Mr. Hostetter has his own separate Nutrient Management Plan for the dairy.

The current crop rotation used by Mr. Truckenmiller for the acres rented from Mr. Rishel is the following: one year corn silage with a small grain silage cover crop, one year of soybeans, one year wheat, and four years' alfalfa all established by no-till methods. Pasture reseedings are also established by no-till.

The combined animal equivalent units on the John Rishel operation is 148.77, Classifying this operation as a concentrated animal operation under Act 38 of 2005.

The proposed NMP for John Rishel indicates no BMPs need to be implemented,

Based on my review, the NMP amendment developed for John Rishel, operation meets the requirements of the PA Nutrient and Odor Management Act and Regulations, and I therefore recommend Commission approval.

NON-FINAL FORM

Version 2

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP.

Nutrient Management Plan

NON-FINAL FORM

Version 1

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP.

For Crop Year(s)

2020

2021

October 12, 2018
Month, Day and Year

Prepared For

Operator's Name, Mailing Address, Telephone Number(s)

September 25, 2018
Month, Day and Year

John Rishel, 1710 Vincent Avenue, Watsonstown, PA 17777
570-412-6675

Operation's Location Address (if different than above)

Same

FINAL FORM

This version of the plan will be considered for action by the Conservation District Board at their November 13, 2018 meeting

October 12, 2018
MONTH, DAY AND YEAR

Site Name (CAFOs)

N/A

Prepared By

Nutrient Management Specialist's Name, Address, Telephone Number(s)

Todd C. Rush
TeamAg Inc.
120 Lake Street
Ephrata, PA 17522
570-764-7003

Nutrient Management Specialist's Program Certification Number

#988-NMC

Administratively Complete Date

9/25/18

Plan Approval Date

Plan Update Submission Date(s)

(updates to the approved plan not requiring board action)



NON-FINAL FORM

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP.

Table of Contents

NON-FINAL FORM

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP.

- Nutrient Management Plan Summary (Excel)
- Nutrient Management Plan Summary Notes (Excel)
- Manure Spreader Calibration Notes (Excel)
- Additional Nutrient Management Plan Requirements (Word)
- Operator Management Map (Mapping Program)
- Appendix 1: Nutrient Management Plan Agreement & Responsibilities (Word)
- Appendix 2: Operation Information (Word)
- Appendix 3: Manure Group Information (Excel)
- Appendix 4: Crop & Manure Management Information (Excel)
- Appendix 5: Phosphorus Index (Excel)
- Appendix 6: Manure Management (Word)
- Appendix 7: Stormwater Control (Word)
- Appendix 8: Importer/Broker Agreements & Nutrient Balance Sheets (Word & Excel)
- Appendix 9: Operation Maps (Mapping Program)
 - Topographic Map
 - Soils Map
- Appendix 10: Supporting Information & Documentation (Excel)

(List below the required documents included in the plan.)

 - Growing Animal Weight Calculator
 - Emergency Response Plan

Nutrient Management Plan

For Crop Year(s)

2019

2020

2021

Prepared For

Operator's Name, Mailing Address, Telephone Number(s)

John Rishel, 1710 Vincent Avenue, Watsonstown, PA 17777
570-412-6675

Operation's Location Address (if different than above)

Same

Site Name (CAFOs)

N/A

Prepared By

Nutrient Management Specialist's Name, Address, Telephone Number(s)

Todd C. Rush
TeamAg Inc.
120 Lake Street
Ephrata, PA 17522
570-764-7003

Nutrient Management Specialist's Program Certification Number

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| Topographic Map | |
| Soils Map | |
| Appendix 10: Supporting Information & Documentation (Excel) | |
| (List below the required documents included in the plan.) | |
| Growing Animal Weight Calculator | |
| Emergency Response Plan | |

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 1.0

Crop Year(s) 2019

Whole Farm Note: See Appendix 8 for manure export details.
 If manure runs out for any field, consult Appendix 4 of the plan for that field. The fertilizer required on any part of the field that does not receive manure can be determined from the 'Net Nutrients Required' for that field.

Operation Acres:

Total Acres: 100.8 Total Acres Available For Nutrient Application Under Operator's Control: Owned: 1 Rented: 0

Animal Equivalent Units: 148.77

Animal Equivalent Units Per Acre: 148.77

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | | |
|--------------|-------|--------------------------------------|----------------------------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|-----|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | |
| P2 | 1 | Established Pasture (without legume) | Farmstead 1A Horse - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | 77 | 0 | 0 | 0 | -28 | -50 |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NMP Summary Notes

Crop Years 2019

| CMU/Field ID | Notes |
|--------------|---|
| P2 | This field is managed as permanent pasture. An average of 1 horse will have access to this pasture for an average of 12 hours per day year round or equivalent. Water and supplemental feed are provided in the horse barn. |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Manure Spreader Calibration Notes

1

Crop Years 2019

| Manure Application Rate | Manure Spreader Used | Spreader Settings | Tractor Used (if applicable) | Tractor Settings (speed, gear, rpm, pto, etc.) |
|---|----------------------|-------------------|------------------------------|--|
| This appendix is not relevant to this farm situation because no manure is mechanically applied on this operation. | N/A | N/A | N/A | N/A |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 1.0

Crop Year(s) 2020

Whole Farm Note: See Appendix 8 for manure export details.
 If manure runs out for any field, consult Appendix 4 of the plan for that field. The fertilizer required on any part of the field that does not receive manure can be determined from the 'Net Nutrients Required' for that field.

Operation Acres:

Total Acres: 100.8 Total Acres Available For Nutrient Application Under Operator's Control: Owned: 1 Rented: 0

Animal Equivalent Units: 148.77

Animal Equivalent Units Per Acre: 148.77

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | | |
|--------------|-------|--------------------------------------|----------------------------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|-----|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | |
| P2 | 1 | Established Pasture (without legume) | Farmstead 1A Horse - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | 77 | 0 | 0 | 0 | -28 | -50 |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NMP Summary Notes

Crop Years 2020

| CMU/Field ID | Notes |
|--------------|---|
| P2 | This field is managed as permanent pasture. An average of 1 horse will have access to this pasture for an average of 12 hours per day year round or equivalent. Water and supplemental feed are provided in the horse barn. |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Manure Spreader Calibration Notes

1

Crop Years 2020

| Manure Application Rate | Manure Spreader Used | Spreader Settings | Tractor Used (if applicable) | Tractor Settings (speed, gear, rpm, pto, etc.) |
|---|----------------------|-------------------|------------------------------|--|
| This appendix is not relevant to this farm situation because no manure is mechanically applied on this operation. | N/A | N/A | N/A | N/A |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 1.0

Crop Year(s) 2021

Whole Farm Note: See Appendix 8 for manure export details.
 If manure runs out for any field, consult Appendix 4 of the plan for that field. The fertilizer required on any part of the field that does not receive manure can be determined from the 'Net Nutrients Required' for that field.

Operation Acres:

Total Acres: 100.8 Total Acres Available For Nutrient Application Under Operator's Control: Owned: 1 Rented: 0

Animal Equivalent Units: 148.77

Animal Equivalent Units Per Acre: 148.77

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | | |
|--------------|-------|--------------------------------------|----------------------------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|-----|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | |
| P2 | 1 | Established Pasture (without legume) | Farmstead 1A Horse - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | 77 | 0 | 0 | 0 | -28 | -50 |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NMP Summary Notes

Crop Years 2021

| CMU/Field ID | Notes |
|--------------|---|
| P2 | This field is managed as permanent pasture. An average of 1 horse will have access to this pasture for an average of 12 hours per day year round or equivalent. Water and supplemental feed are provided in the horse barn. |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Manure Spreader Calibration Notes

1

Crop Years 2021

| Manure Application Rate | Manure Spreader Used | Spreader Settings | Tractor Used (if applicable) | Tractor Settings (speed, gear, rpm, pto, etc.) |
|---|----------------------|-------------------|------------------------------|--|
| This appendix is not relevant to this farm situation because no manure is mechanically applied on this operation. | N/A | N/A | N/A | N/A |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Additional Nutrient Management Plan Requirements

Manure Management and Stormwater BMP Implementation Summary

| Best Management Practice | NRCS Practice Code ¹ | BMP Location | Implementation Season & Year |
|--------------------------|---------------------------------|--------------|------------------------------|
| None | N/A | N/A | N/A |

¹ If applicable, enter USDA-NRCS Practice Code. For other non-technical BMPs, leave blank.

In-Field Manure Stacking Procedures

Manure must be applied to the field within 120 days of stacking or the stacks must be covered. Stacks must be implemented and maintained according to sound BMPs, addressing concerns such as soil type, soil slope, shape of the pile, setbacks, and rotation of piles.

This operation does not field stack manure.

Additional CAFO Requirements

In-field stacking criteria, winter storage requirements, and other issues identified by DEP's review of the nutrient management plan.

This operation is not a CAFO.

Proposed Manure Storage Description

Type, dimensions, volume, freeboard and location on map.

There are no manure storages proposed for this operation.

Description of Planned Alternative Manure Technology Practices

Type of practice, volume of manure addressed, and result of practice.

There are no alternative manure technology practices planned for this operation.

Exported Manure Summary

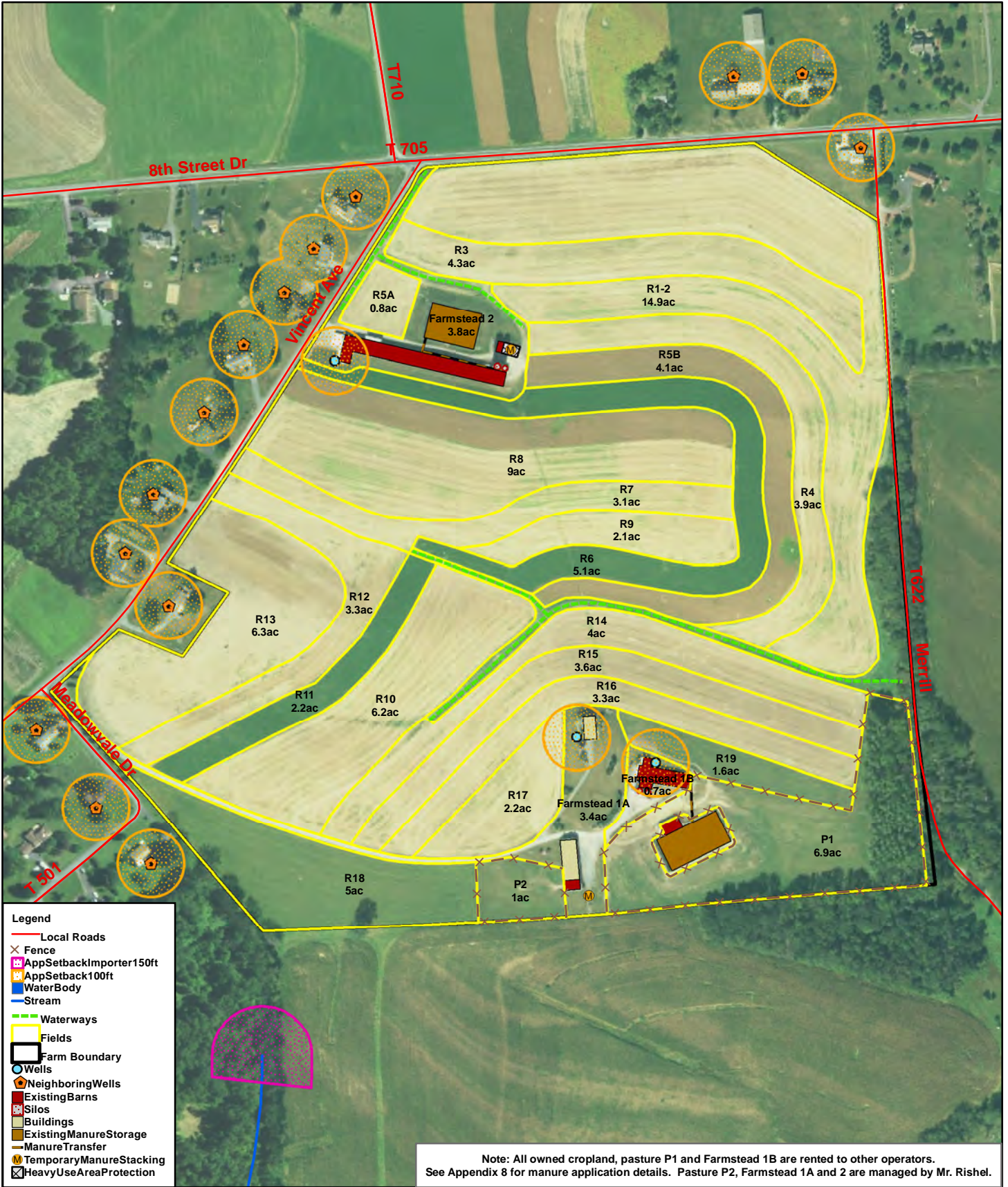
Summarize in a short paragraph the arrangements proposed for the manure to be exported from the operation. This information is described in more detail in Appendix 8 of this plan.

Liquid and solid cattle manure is exported to known manure importers for application on cropland.

Operator Management Map

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Operator Management Map** is to be included here in the Nutrient Management Plan Summary and must include field identification, acreage and boundaries, manure application setback areas and buffers and associated landscape features (streams and other water bodies, sinkholes and active water wells), location of existing and proposed structural BMPs (including manure storage facilities), location of existing or proposed emergency manure stacking areas and in-field manure stacking areas, and road names adjacent to and within the operation. All features on the map must be clearly identified and include a legend for setback areas and other features. The Topographic Map and Soils Map must be included in Appendix 9.

John Rishel Operator Management Map



Appendix 1

Nutrient Management Plan Agreement & Responsibilities

Plan Implementation Requirements

This nutrient management plan has been developed to meet the requirements of the following programs:

Form with checkboxes for Pennsylvania Act 38 of 2005, CAO, VAO, Pennsylvania CAFO, and Other program.

Plans developed under these programs are required to be implemented as approved in order to maintain compliance with the specific law or program.

The nutrient management plan has been developed as a: (check one)

Form with checkboxes for 1-Year Plan for Crop Year and 3-Year Plan for Crop Years, including a table for years 2019, 2020, and 2021.

Records required to be maintained include the following:

- 1) Annual crop yields
2) Manure and fertilizer application rates, locations and date of application
3) Manure production figures for the various manure groups listed in your plan
4) Soil test reports (testing required every 3 years per crop management unit)
5) Manure test reports (testing required once a year for each manure group)
6) Number of animals on pasture, number of days on pasture, and hours per day on pasture
7) For operations exporting manure, Manure Export Sheets
8) BMP designs and certification for new liquid and semi-solid manure storage facilities

The following has been confirmed:

Form with checkboxes for Verification of Ag E&S Plan and Verification of Existing Site Specific Emergency Response Plan.

Verification that owners of rented/leased lands have been notified that a nutrient management plan has been developed which calls for manure to be applied to their lands and that they have no objections to the plan requirements.

Form with checkboxes for Owners Notified and No Rented/Leased Lands.

Specialist Signature

I affirm that the information contained in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, based on information provided by the operator; that this plan has been developed in accordance with the criteria established for the program(s) indicated above; and that I have presented the final complete plan to the operator and discussed the content and implementation of this plan with the operator, subject to the penalties of 18 Pa.C.S.A. § 4904, relating to unsworn falsification to authorities.

Specialist Signature and Date fields with handwritten signature and date 07/31/18.

Operator Signature

I understand and agree that I will implement the practices, procedures and record keeping obligations as outlined in this plan in order to protect water quality and address the nutrient needs of the crops associated with the operation. I agree that if I use a commercial hauler or broker for the application or export of manure, that only haulers or brokers that hold a valid certification issued by the Pa Department of Agriculture, under Act 49 of 2004, will be used. I affirm that all information provided in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, and reflects the current and planned activities of the operation; and that, if this plan was completed by a nutrient management specialist, I have reviewed the final completed plan and the specialist has discussed the content and implementation of this plan with me, subject to the penalties of 18 Pa.C.S.A. § 4904, relating to unsworn falsification to authorities.

Operator Signature John Miller
Operator Title OWNER
Date 9/1/18

Appendix 2

Operation Information

Operation Description

Animal types and numbers; cropland, hayland and pastureland acreage; farmstead acreage; crop rotation (crops, sequence of crops, and number of years for each crop); manure group management, including atypical manure (contributing animal groups, collection, storage and handling procedures); mortality composting management.

John Rishel operates a custom heifer raising farm in Northumberland County, PA. The operation consists of a total of 85 acres of cropland of which 28 acres are typically managed as hayland, 7.9 acres of pasture and 7.9 acres of farmstead. Mr. Rishel rents all 85 acres of owned cropland to Gary Truckenmiller and is not under management control of these acres. Mr. Rishel also rents 6.9 acres of pasture (field P1) and 0.7 acres of farmstead (Farmstead 1B) to Mervin B. Hostetler and is not under management control of these acres. Mr. Hostetler operates a dairy cattle herd at the acres he rents from Mr. Rishel and has his own separate nutrient management plan for his operation. After accounting for the acres that are rented to other operators, Mr. Rishel has management control of only Farmstead 1A, Farmstead 2 and pasture field P2. The current crop rotation used by Mr. Truckenmiller at the rented cropland is one year of corn silage with a small grain silage cover crop followed by one year of soybeans, one year of wheat and four years of alfalfa. All crops are established using no-till planting methods. Pasture reseedings are also completed using no-till planting methods. The livestock operation consists of an average of 20 – 3 to 5 month old calves, 40 – 5 to 8 month old calves, 40 – 8 to 12 month old calves, 50 – 12 to 17 month old heifers, 50 – 17 to 23 month old heifers and 2 horses. Calves and heifers are housed in a barn at Farmstead 2 and do not have access to pasture. Manure from the 20 – 3 to 5 month old calves is collected as a solid and accumulates in the barn. Manure from the remaining calf and heifer groups is collected together, handled as a liquid and stored in a HDPE lined manure storage pond at Farmstead 2. One horse is kept on pasture field P1 year round and has access to a barn at Farmstead 1A for feed and water. The other horse is kept in a barn at Farmstead 2 year round and does not have access to pasture. Collected horse manure at Farmstead 1A is temporarily stacked outside of the horse barn until it is moved to Farmstead 2 and mixed with solid cattle manure or added to the mortality compost pile. Collected horse manure at Farmstead 2 is mixed with solid cattle manure or added to the mortality compost pile. All collected manure is exported to known manure importers in the spring and fall. Mortalities are composted at Farmstead 2. Mortality compost is mixed with collected solid cattle manure and exported to known manure importers when needed.

County(s)

Northumberland County / Delaware Township

Name of Receiving Stream(s)/Watershed(s)

Unnamed Tributary to Warrior Run – WWF

Notation of Special Protection Waters

None

Operation Acres

Total Acres: 100.8 acres

Total Acres Available for Nutrient Application Under Operator's Control

Owned: 1.0 acre

Rented: 0 acres

Names & Addresses of Owners of Rented or Leased Land

None

Existing Manure Storages & Capacity

Type of storage, dimensions, useable capacity, freeboard, top or bottom loaded, dimensions and description of contributing runoff area, description of wastewater additions, types and amounts of bedding. Briefly describe, for each manure group, manure storage management during removal (degree of agitation, method of manure removal, extent the storage is emptied, type of unremoved manure, etc.) and manure sampling procedures.

A 105' x 150' x 12' HDPE lined manure storage pond exists on the operation. The storage has a usable capacity of 793,821 gallons when accounting for a 1 foot freeboard and the volume of a 25 year / 24 hour storm event. No bedding, waste water or runoff water is added to the storage. Manure is transferred from the calf and heifer barn to the bottom of the storage using a gravity flow pipe system. The storage is fully agitated during manure removal. Manure is pumped directly from the storage into manure application equipment. The majority of the manure is removed from the storage when it is emptied; however all a small amount of liquid manure remains in the bottom of the storage each time it is emptied. Manure samples are to be collected while the storage is being emptied in the spring and fall for a total of two separate samples per year. Several manure samples should be taken while the storage is being emptied and combined into one representative sample that is submitted for analysis.

Manure Application Equipment Capacity & Practical Application Rates

Description of application equipment, practical application rates based on calibration and calibration method used, the data recorded during equipment calibration is to be retained on the farm. If applicable, name and Act 49 certification number of custom applicator.

This appendix is not relevant to this farm situation because no manure is mechanically applied on this operation.

| Appendix 3 Manure Group Information Crop Yrs. 2019 | Liquid Manure | | Solid Manure | |
|--|-----------------------------|--|--------------------------|----------------------------|
| Manure Report Date (note if averaging several reports) | July 9, 2018 | | July 9, 2018 | |
| Laboratory Name | Waypoint Analytical | | Waypoint Analytical | |
| Manure Type | Dairy | | Dairy | |
| Manure Unit (lbs/ton or 1000 gal) | lb/1000 gal | | lb/ton | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 29.68 | | 10.67 | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 15.71 | | 5.40 | |
| Total Organic N (lbs/ton or 1000 gal) | 13.97 | Go to NMP Index | 5.27 | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 15.20 | Go to Appendix 3 Input | 10.02 | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 37.70 | Go to Manure Avg Input | 16.83 | |
| Percent Solids | 5.28 | Grazing Calculator | 30.70 | |
| PSC Value (analytical or book value) | 0.80 | | 0.80 | |
| Percent Moisture | 94.72 | | 69.30 | |
| Manure Group AEU's | 140.37 | | 8.40 | |
| Description: Site & Season Applied | HDPE Lined Pond | Spring & Fall Export | Heifer Barn | Spring & Fall Export |
| Inventory Method | Records | | Records | |
| | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. |
| Manure Group Identification | Liquid Manure | | Solid Manure | Solid Manure - uncollected |
| CALCULATED: Total Manure Collected Per Manure Group Units | | | | 5.5 Tons |
| RECORDS: Total Manure Collected Per Manure Group Unit | 520,000.0 gallons | | 150.0 tons | |
| Manure Used On-Farm Units | Collected 0.0 Gallons | Uncollected 0.0 | Collected 0.0 Tons | Uncollected 5.5 Tons |
| Manure Exported Units | 520,000.0 gallons | | 150.0 tons | |
| Manure Allocation Balance Units | 0.0 Gallons | 0.0 | 0.0 Tons | 0.0 Tons |
| Manure Balance as a Percent of Total Manure Collected | 0.0% | | 0.0% | |
| Total Rainfall and Runoff | 0 gallons | | 0 tons | |

| Appendix 3 Manure Group Information Crop Yrs. 2019 | Liquid Manure | | Solid Manure | |
|--|------------------------------------|---|------------------------------------|---|
| | Manure Generation per Animal Group | Uncollected Manure: Nutrient Analysis Book Values | Manure Generation per Animal Group | Uncollected Manure: Nutrient Analysis Book Values |
| Animal Group 1 | 5 to 8 Month Calf | App 3 Input | 3 to 5 Month Calf | Grazing Calculator |
| Animal Type | Calf: 5-8 mo. | | Calf: 3-5 mo. | |
| Animal Number | 40 | | 20 | |
| Animal Weight | 448 | | 310 | |
| Animal Group AUs | 17.92 | | 6.20 | |
| Animal Group AEUs | 17.92 | | 6.20 | |
| Daily Manure Production per AU | 9.2 | | 80.0 | |
| Total Days Manure Produced | 365 | | 365 | |
| Total Manure Produced | | | | |
| Days On Pasture | 0 | | 0 | |
| Hours Per Day On Pasture | 0 | | 0 | |
| Total Bedding | | | | |
| Total Washwater | | | | |
| CALCULATED - Total Uncollected Manure Per Animal Group | | | | |
| CALCULATED-Total Manure Collected Per Animal Group | | | | |

| | | | | |
|--|--------------------|-------------|--------------------|----------|
| Animal Group 2 | 8 to 12 Month Calf | App 3 Input | Farmstead 1A Horse | 6 - Tons |
| Animal Type | Calf: 8-12 mo. | | Light Horse Mature | |
| Animal Number | 40 | | 1 | |
| Animal Weight | 640 | | 1100 | |
| Animal Group AUs | 25.60 | | 1.10 | |
| Animal Group AEUs | 25.60 | | 1.10 | |
| Daily Manure Production per AU | 9.2 | | 55.0 | |
| Total Days Manure Produced | 365 | | 365 | |
| Total Manure Produced | | | | |
| Days On Pasture | 0 | | 365 | |
| Hours Per Day On Pasture | 0 | | 12 | |
| Total Bedding | | | | |
| Total Washwater | | | | |
| CALCULATED - Total Uncollected Manure Per Animal Group | | | 5.5 | |
| CALCULATED-Total Manure Collected Per Animal Group | | | | |

| Appendix 3 Manure Group Information Crop Yrs. 2019 | Liquid Manure | | Solid Manure | |
|--|------------------------------------|---|------------------------------------|---|
| | Manure Generation per Animal Group | Uncollected Manure: Nutrient Analysis Book Values | Manure Generation per Animal Group | Uncollected Manure: Nutrient Analysis Book Values |
| Animal Group 3 | 12 to 17 Month Heifer | | Farmstead 2 Horse | |
| Animal Type | Heifer: 12-17 mo. | | Light Horse Mature | |
| Animal Number | 50 | | 1 | |
| Animal Weight | 854 | | 1100 | |
| Animal Group AUs | 42.70 | | 1.10 | |
| Animal Group AEUs | 42.70 | | 1.10 | |
| Daily Manure Production per AU | 6.9 | | 55.0 | |
| Total Days Manure Produced | 365 | | 365 | |
| Total Manure Produced | | | | |
| Days On Pasture | 0 | | 0 | |
| Hours Per Day On Pasture | 0 | | 0 | |
| Total Bedding | | | | |
| Total Washwater | | | | |
| CALCULATED - Total Uncollected Manure Per Animal Group | | | | |
| CALCULATED-Total Manure Collected Per Animal Group | | | | |

[App 3 Input](#)

| | | | | |
|--|-----------------------|--|--|--|
| Animal Group 4 | 17 to 23 Month Heifer | | | |
| Animal Type | Heifer: 17-23 mo. | | | |
| Animal Number | 50 | | | |
| Animal Weight | 1083 | | | |
| Animal Group AUs | 54.15 | | | |
| Animal Group AEUs | 54.15 | | | |
| Daily Manure Production per AU | 6.9 | | | |
| Total Days Manure Produced | 365 | | | |
| Total Manure Produced | | | | |
| Days On Pasture | 0 | | | |
| Hours Per Day On Pasture | 0 | | | |
| Total Bedding | | | | |
| Total Washwater | | | | |
| CALCULATED - Total Uncollected Manure Per Animal Group | | | | |
| CALCULATED-Total Manure Collected Per Animal Group | | | | |

[App 3 Input](#)

| Appendix 3 Manure Group Information Crop Yrs. 2020 | Liquid Manure | | Solid Manure | |
|--|--|----------------------|--------------------------|----------------------------|
| Manure Report Date (note if averaging several reports) | July 9, 2018 | | July 9, 2018 | |
| Laboratory Name | Waypoint Analytical | | Waypoint Analytical | |
| Manure Type | Dairy | | Dairy | |
| Manure Unit (lbs/ton or 1000 gal) | lb/1000 gal | | lb/ton | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 29.68 | | 10.67 | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 15.71 | | 5.40 | |
| Total Organic N (lbs/ton or 1000 gal) | 13.97 Go to NMP Index | | 5.27 | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 15.20 Go to Appendix 3 Input | | 10.02 | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 37.70 Go to Manure Avg Input | | 16.83 | |
| Percent Solids | 5.28 Grazing Calculator | | 30.70 | |
| PSC Value (analytical or book value) | 0.80 | | 0.80 | |
| Percent Moisture | 94.72 | | 69.30 | |
| Manure Group AEU's | 140.37 | | 8.40 | |
| Description: Site & Season Applied | HDPE Lined Pond | Spring & Fall Export | Heifer Barn | Spring & Fall Export |
| Inventory Method | Records | | Records | |
| | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. |
| Manure Group Identification | Liquid Manure | | Solid Manure | Solid Manure - uncollected |
| CALCULATED: Total Manure Collected Per Manure Group Units | | | | 5.5 Tons |
| RECORDS: Total Manure Collected Per Manure Group Unit | 520,000.0 gallons | | 150.0 tons | |
| Manure Used On-Farm Units | Collected 0.0 Gallons | Uncollected 0.0 | Collected 0.0 Tons | Uncollected 5.5 Tons |
| Manure Exported Units | 520,000.0 gallons | | 150.0 tons | |
| Manure Allocation Balance Units | 0.0 Gallons | 0.0 | 0.0 Tons | 0.0 Tons |
| Manure Balance as a Percent of Total Manure Collected | 0.0% | | 0.0% | |
| Total Rainfall and Runoff | 0 gallons | | 0 tons | |

| Appendix 3 Manure Group Information Crop Yrs. 2021 | Liquid Manure | | Solid Manure | |
|--|--|----------------------|--------------------------|----------------------------|
| Manure Report Date (note if averaging several reports) | July 9, 2018 | | July 9, 2018 | |
| Laboratory Name | Waypoint Analytical | | Waypoint Analytical | |
| Manure Type | Dairy | | Dairy | |
| Manure Unit (lbs/ton or 1000 gal) | lb/1000 gal | | lb/ton | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 29.68 | | 10.67 | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 15.71 | | 5.40 | |
| Total Organic N (lbs/ton or 1000 gal) | 13.97 Go to NMP Index | | 5.27 | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 15.20 Go to Appendix 3 Input | | 10.02 | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 37.70 Go to Manure Avg Input | | 16.83 | |
| Percent Solids | 5.28 Grazing Calculator | | 30.70 | |
| PSC Value (analytical or book value) | 0.80 | | 0.80 | |
| Percent Moisture | 94.72 | | 69.30 | |
| Manure Group AEU's | 140.37 | | 8.40 | |
| Description: Site & Season Applied | HDPE Lined Pond | Spring & Fall Export | Heifer Barn | Spring & Fall Export |
| Inventory Method | Records | | Records | |
| | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. |
| Manure Group Identification | Liquid Manure | | Solid Manure | Solid Manure - uncollected |
| CALCULATED: Total Manure Collected Per Manure Group Units | | | | 5.5 Tons |
| RECORDS: Total Manure Collected Per Manure Group Unit | 520,000.0 gallons | | 150.0 tons | |
| Manure Used On-Farm Units | Collected 0.0 Gallons | Uncollected 0.0 | Collected 0.0 Tons | Uncollected 5.5 Tons |
| Manure Exported Units | 520,000.0 gallons | | 150.0 tons | |
| Manure Allocation Balance Units | 0.0 Gallons | 0.0 | 0.0 Tons | 0.0 Tons |
| Manure Balance as a Percent of Total Manure Collected | 0.0% | | 0.0% | |
| Total Rainfall and Runoff | 0 gallons | | 0 tons | |

| Manure Analysis 5 Year Running Average | | | | | | |
|--|----------------------------|---------------------|---------------|-------------|-------------|-------------|
| Manure Average for Crop Years. 2019 | Liquid Manure | | | | | |
| | Average | 1 year ago | 2 years ago | 3 years ago | 4 years ago | 5 years ago |
| Manure Report Date | Jul 09 2018 | Jul 09 2018 | May 29 2018 | Mar 09 2012 | | |
| Laboratory Name | Waypoint Analytical | Waypoint Analytical | Agri Analysis | CVAS | | |
| Manure Type | Dairy | Dairy | Dairy | Dairy | | |
| Manure Unit (lbs/ton or 1000 gal) | lb/1000 gal | lb/1000 gal | lb/1000 gal | lb/1000 gal | | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 29.68 | 21.50 | 24.83 | 42.70 | | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 15.71 | 9.10 | 16.46 | 21.57 | | |
| Total Organic N (lbs/ton or 1000 gal) | 13.97 | 12.40 | 8.37 | 21.13 | | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 15.20 | 8.60 | 16.94 | 20.07 | | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 37.70 | 26.30 | 33.41 | 53.40 | | |
| Percent Solids | 5.28 | 2.70 | 5.30 | 7.84 | | |
| PSC Value (Enter analytical or book value) | 0.80 | 0.80 | 0.80 | 0.80 | | |

| Manure Average for Crop Years. 2019 | Solid Manure | | | | | |
|--|----------------------------|---------------------|---------------|-------------|-------------|-------------|
| | Average | 1 year ago | 2 years ago | 3 years ago | 4 years ago | 5 years ago |
| Manure Report Date | Jul 09 2018 | Jul 09 2018 | Apr 16 2015 | | | |
| Laboratory Name | Waypoint Analytical | Waypoint Analytical | Agri Analysis | | | |
| Manure Type | Dairy | Dairy | Dairy | | | |
| Manure Unit (lbs/ton or 1000 gal) | lb/ton | lb/ton | lb/ton | | | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 10.67 | 7.02 | 14.31 | | | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 5.40 | 3.34 | 7.45 | | | |
| Total Organic N (lbs/ton or 1000 gal) | 5.27 | 3.68 | 6.86 | | | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 10.02 | 9.29 | 10.74 | | | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 16.83 | 19.80 | 13.85 | | | |
| Percent Solids | 30.70 | 26.80 | 34.60 | | | |
| PSC Value (Enter analytical or book value) | 0.80 | 0.80 | 0.80 | | | |

| App. 4: Crop Yrs. 2019 | | P2 | | |
|--|--|----------------------------|---------------|--|
| CMU/Field ID | | | | |
| Acres | 1.0 | | | |
| Soil Test Report Date | July 9, 2018 | | | |
| Laboratory Name | Waypoint Analytical | | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | |
| | 296 | 344 | 7.2 | |
| P Index Part A Evaluation | Soil Test P | | | |
| Part A Result | Part B | | | |
| Crop | Established Pasture (without legume) | | | |
| Planned Yield | 2.5 ton/A | | | |
| PSU Soil Test Recommendation (lb/A) | N | P2O5 | K2O | |
| | 125 | 0 | 0 | |
| User Soil Test Recommendation (lb/A) | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | |
| P Index Application Method | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | |
| Net Nutrients Required (lb/A) | 90 | 0 | 0 | |
| Manure Group | Farmstead 1A Horse - Uncollected | | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Grazing anytime with nutrient uptake during growing season | | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | |
| | 0.20 | | | |
| P Index Application Method | Surface app. when frozen/snow covered | | | |
| N Balanced Manure Rate (ton; gal/A) | 38 tons/A | | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 8 tons/A | | | |
| | Crop P Removal (lb/A) 37.5 | | | |
| P Index Value | 29 | | | |
| Planned Manure Rate (ton or gal/A) | 5.5 tons/A | | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 13 | 28 | 50 | |
| Nutrient Balance after Manure | 77 | -28 | -50 | |
| Supplemental Fertilizer (lb/A) | 77 | 0 | 0 | |
| P Index Application Method | | | | |
| Final Nutrient Balance (lb/A) | 0 | -28 | -50 | |
| Multiple Application | | | | |
| Manure Utilized on CMU | 6 tons | | | |

| App. 4: Crop Yrs. 2020 | | P2 | | |
|--|--|----------------------------|---------------|--|
| CMU/Field ID | | | | |
| Acres | 1.0 | | | |
| Soil Test Report Date | July 9, 2018 | | | |
| Laboratory Name | Waypoint Analytical | | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | |
| | 296 | 344 | 7.2 | |
| P Index Part A Evaluation | Soil Test P | | | |
| Part A Result | Part B | | | |
| Crop | Established Pasture (without legume) | | | |
| Planned Yield | 2.5 ton/A | | | |
| PSU Soil Test Recommendation (lb/A) | N | P2O5 | K2O | |
| | 125 | 0 | 0 | |
| User Soil Test Recommendation (lb/A) | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | |
| P Index Application Method | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | |
| Net Nutrients Required (lb/A) | 90 | 0 | 0 | |
| Manure Group | Farmstead 1A Horse - Uncollected | | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Grazing anytime with nutrient uptake during growing season | | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | |
| | 0.20 | | | |
| P Index Application Method | Surface app. when frozen/snow covered | | | |
| N Balanced Manure Rate (ton; gal/A) | 38 tons/A | | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 8 tons/A | | | |
| | Crop P Removal (lb/A) 37.5 | | | |
| P Index Value | 29 | | | |
| Planned Manure Rate (ton or gal/A) | 5.5 tons/A | | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 13 | 28 | 50 | |
| Nutrient Balance after Manure | 77 | -28 | -50 | |
| Supplemental Fertilizer (lb/A) | 77 | 0 | 0 | |
| P Index Application Method | | | | |
| Final Nutrient Balance (lb/A) | 0 | -28 | -50 | |
| Multiple Application | | | | |
| Manure Utilized on CMU | 6 tons | | | |

| App. 4: Crop Yrs. 2021 | | P2 | | |
|--|--|----------------------------|---------------|--|
| CMU/Field ID | | | | |
| Acres | 1.0 | | | |
| Soil Test Report Date | July 9, 2018 | | | |
| Laboratory Name | Waypoint Analytical | | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | |
| | 296 | 344 | 7.2 | |
| P Index Part A Evaluation | Soil Test P | | | |
| Part A Result | Part B | | | |
| Crop | Established Pasture (without legume) | | | |
| Planned Yield | 2.5 ton/A | | | |
| PSU Soil Test Recommendation (lb/A) | N | P2O5 | K2O | |
| | 125 | 0 | 0 | |
| User Soil Test Recommendation (lb/A) | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | |
| P Index Application Method | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | |
| Net Nutrients Required (lb/A) | 90 | 0 | 0 | |
| Manure Group | Farmstead 1A Horse - Uncollected | | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Grazing anytime with nutrient uptake during growing season | | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | |
| | 0.20 | | | |
| P Index Application Method | Surface app. when frozen/snow covered | | | |
| N Balanced Manure Rate (ton; gal/A) | 38 tons/A | | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 8 tons/A | | | |
| | Crop P Removal (lb/A) 37.5 | | | |
| P Index Value | 29 | | | |
| Planned Manure Rate (ton or gal/A) | 5.5 tons/A | | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 13 | 28 | 50 | |
| Nutrient Balance after Manure | 77 | -28 | -50 | |
| Supplemental Fertilizer (lb/A) | 77 | 0 | 0 | |
| P Index Application Method | | | | |
| Final Nutrient Balance (lb/A) | 0 | -28 | -50 | |
| Multiple Application | | | | |
| Manure Utilized on CMU | 6 tons | | | |

Appendix 5 - P Index

Crop Yrs. 2019

Pennsylvania P Index Version 2

[Go to NMP Index](#)

[Go to App 4 Input](#)

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | CMU/Field ID | P2 |
|---|--|---|---|---|---|--|-------|
| Is the CMU in a Special Protection watershed? | | Is the CMU in a Special Protection watershed? | | | | | No |
| A significant farm management change as defined by Act 38? | | Is there a significant farm management change as defined by Act 38? | | | | If the answer is Yes to any of these questions, Part B must be used. | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | | Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) | | | | | 296 |
| Contributing Distance from CMU to receiving water <150 ft.? | | Is the Contributing Distance from this CMU to receiving water less than 150 ft.? | | | | | No |
| Is winter manure application planned for this field ? | | Is winter manure application planned for this field ? | | | | | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | 296 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | | 59 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - |
| SUPPLEMENTAL P FERTILIZER | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | | 0 |
| MANURE P RATE | | Manure P (lb P2O5/acre) | | | | | 28 |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | 1 |
| P SOURCE COEFFICIENT ³ | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | | 22 |
| Source Factor Sum | | | | | | | 81 |
| PART B: TRANSPORT FACTORS | | Soil Loss (ton/acre/yr) | | | | | 0.252 |
| EROSION | | | | | | | |
| RUNOFF POTENTIAL | 0 <i>Drainage Class is Excessively</i> | 2 <i>Drainage Class is Somewhat Excessively</i> | 4 <i>Drainage Class is Well/Moderately Well</i> | 6 <i>Drainage Class is Somewhat Poorly</i> | 8 <i>Drainage Class is Poorly/Very Poorly</i> | | 4 |
| SUBSURFACE DRAINAGE | 0 None | | 1 Random | | 2 ¹ Patterned | | 0 |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | | 4 |
| MODIFIED CONNECTIVITY | 0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | | 1.0 |
| Transport Sum x Modified Connectivity / 24 | | | | | | | 0.18 |
| P Index Value = 2 x Source x Transport | | | | | | | 29 |

| | | | |
|--|---|--|--|
| Low: 59 or less Nitrogen based management | Medium: 60 to 79 Nitrogen based management | High: 80 to 99 Phosphorus limited to crop removal | Very High: 100 or greater No Phosphorus applied |
|--|---|--|--|

1 OR rapidly permeable soil near a stream
 2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
 3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Appendix 5 - P Index

Crop Yrs. 2020

Pennsylvania P Index Version 2

[Go to NMP Index](#)

[Go to App 4 Input](#)

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | CMU/Field ID | P2 |
|---|--|---|---|---|---|--|-------|
| Is the CMU in a Special Protection watershed? | | Is the CMU in a Special Protection watershed? | | | | | No |
| A significant farm management change as defined by Act 38? | | Is there a significant farm management change as defined by Act 38? | | | | If the answer is Yes to any of these questions, Part B must be used. | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | | Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) | | | | | 296 |
| Contributing Distance from CMU to receiving water <150 ft.? | | Is the Contributing Distance from this CMU to receiving water less than 150 ft.? | | | | | No |
| Is winter manure application planned for this field ? | | Is winter manure application planned for this field ? | | | | | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | 296 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | | 59 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - |
| SUPPLEMENTAL P FERTILIZER | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | | 0 |
| MANURE P RATE | | Manure P (lb P2O5/acre) | | | | | 28 |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | 1 |
| P SOURCE COEFFICIENT ³ | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | | 22 |
| Source Factor Sum | | | | | | | 81 |
| PART B: TRANSPORT FACTORS | | Soil Loss (ton/acre/yr) | | | | | 0.252 |
| EROSION | | | | | | | |
| RUNOFF POTENTIAL | 0 <i>Drainage Class is Excessively</i> | 2 <i>Drainage Class is Somewhat Excessively</i> | 4 <i>Drainage Class is Well/Moderately Well</i> | 6 <i>Drainage Class is Somewhat Poorly</i> | 8 <i>Drainage Class is Poorly/Very Poorly</i> | | 4 |
| SUBSURFACE DRAINAGE | 0 None | | 1 Random | | 2 ¹ Patterned | | 0 |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | | 4 |
| MODIFIED CONNECTIVITY | 0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | | 1.0 |
| Transport Sum x Modified Connectivity / 24 | | | | | | | 0.18 |
| P Index Value = 2 x Source x Transport | | | | | | | 29 |

| | | | |
|--|---|--|--|
| Low: 59 or less Nitrogen based management | Medium: 60 to 79 Nitrogen based management | High: 80 to 99 Phosphorus limited to crop removal | Very High: 100 or greater No Phosphorus applied |
|--|---|--|--|

1 OR rapidly permeable soil near a stream
 2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
 3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Appendix 5 - P Index

Crop Yrs. 2021

Pennsylvania P Index Version 2

[Go to NMP Index](#)

[Go to App 4 Input](#)

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | CMU/Field ID | P2 |
|---|--|---|---|---|---|--|-------|
| Is the CMU in a Special Protection watershed? | | Is the CMU in a Special Protection watershed? | | | | | No |
| A significant farm management change as defined by Act 38? | | Is there a significant farm management change as defined by Act 38? | | | | If the answer is Yes to any of these questions, Part B must be used. | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | | Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) | | | | | 296 |
| Contributing Distance from CMU to receiving water <150 ft.? | | Is the Contributing Distance from this CMU to receiving water less than 150 ft.? | | | | | No |
| Is winter manure application planned for this field ? | | Is winter manure application planned for this field ? | | | | | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | 296 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | | 59 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - |
| SUPPLEMENTAL P FERTILIZER | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | | 0 |
| MANURE P RATE | | Manure P (lb P2O5/acre) | | | | | 28 |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | 1 |
| P SOURCE COEFFICIENT ³ | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | | 22 |
| Source Factor Sum | | | | | | | 81 |
| PART B: TRANSPORT FACTORS | | Soil Loss (ton/acre/yr) | | | | | 0.252 |
| EROSION | | | | | | | |
| RUNOFF POTENTIAL | 0 <i>Drainage Class is Excessively</i> | 2 <i>Drainage Class is Somewhat Excessively</i> | 4 <i>Drainage Class is Well/Moderately Well</i> | 6 <i>Drainage Class is Somewhat Poorly</i> | 8 <i>Drainage Class is Poorly/Very Poorly</i> | | 4 |
| SUBSURFACE DRAINAGE | 0 None | | 1 Random | | 2 ¹ Patterned | | 0 |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | | 4 |
| MODIFIED CONNECTIVITY | 0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | | 1.0 |
| Transport Sum x Modified Connectivity / 24 | | | | | | | 0.18 |
| P Index Value = 2 x Source x Transport | | | | | | | 29 |

| | | | |
|--|---|--|--|
| Low: 59 or less Nitrogen based management | Medium: 60 to 79 Nitrogen based management | High: 80 to 99 Phosphorus limited to crop removal | Very High: 100 or greater No Phosphorus applied |
|--|---|--|--|

1 OR rapidly permeable soil near a stream
 2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
 3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Appendix 6

Manure Management

Date of Site Evaluation: June 15, 2018

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated.

The following areas were evaluated: calf and heifer barn, HDPE lined manure storage pond, silos, mortality compost pile, horse barn, pasture access area, horse manure temporary stacking area, farmsteads

Identification of Inadequate Manure Management Practices and Conditions

List of each specific inadequate manure management practice or condition identified.

The potential for the growth of woody vegetation on the berms of the HDPE lined manure storage pond was noted at the site visit.

BMPs to Address Manure Management Problem Areas

List of specific BMPs (including PA Technical Guide standard name and number) and management changes that will be implemented to address each of the inadequate practices listed above.

A good vegetative cover should be maintained on the berms and embankments of the HDPE lined manure storage pond. Vegetation should be mowed at least 3 times annually. If the vegetative cover is damaged it should be re-seeded as soon as possible. Trees, shrubs and other taproot plants should be removed immediately upon discovery.

Appendix 7 Stormwater Control

Date of Site Evaluation: June 15, 2018

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated.

The following areas were evaluated: pasture P2

Identification of Critical Runoff Problem Areas

List of each specific critical runoff problem area identified.

No critical runoff problem areas were identified at the time of the site visit.

BMPs to Address Critical Runoff Problem Areas

List of BMPs (including PA Technical Guide standard name and number) and specific management changes that will be implemented to address each of the critical runoff problem areas listed above.

None

Appendix 8
Importer/Broker Agreements & NBSs

Nutrient Balance Sheets are not required for importers that have an approved Nutrient Management Plan.

Exporter/Importer Agreement

Manure Used For Agricultural Land Application

Developed consistent with the PA Nutrient and Odor Management Act Program

- 1) This agreement is entered into on June 20, 2018, by John Rishel (the “exporter”) who will supply manure, and Gary Truckenmiller (the “importer”), who will receive the manure from the exporter.
- 2) The purpose of this agreement is to set forth the mutual responsibilities and understanding of the parties with respect to the export of manure from the exporter to the importer.
- 3) The exporter is located at (county, twp, and address): Northumberland County, Delaware Township
1710 Vincent Avenue, Watsontown, PA 17777
- 4) The exporter will, as the supply of manure allows, provide the following amounts of manure during the seasons outlined below:

Tons of Cattle manure, per season:

Spring up to 850 tons or Summer 0 tons or Fall up to 850 tons or Winter up to 850 tons

Gallons of Cattle manure, per season:

Spring up to 680,000 gallons or Summer 0 gallons or Fall up to 680,000 gallons or Winter up to 680,000 gallons

Total planned manure exported: (supply of manure may be less than what is planned)

Tons of Cattle manure: up to a total of 850 tons per year

Gallons of Cattle manure: up to a total of 680,000 gallons per year

If multi-species are planned, please add additional lines:

- 5) The importer's location and other relevant information as it relates to this manure export, is as follows (maps indicating the location of importing fields must be attached to the supporting Nutrient Balance Sheets if manure is to be land applied at the importing site):
 - a) **Phone number:** 570-713-4249
 - b) **County(s):** Northumberland
 - c) **Address:** 2145 Cronrath Road, Watsontown, PA 17777
 - d) **Township(s):** Delaware
 - d) **Owner(s) of the property receiving manure:** John Rishel
 - e) **Total cropland acres managed by the importer:** 600 acres
 - f) **Number and type of animals raised by the importer:** 100 milk cows, 100 replacement heifers
 - g) **Number of acres available for this imported manure:** 85 acres
 - h) **Other manures (type, amount) imported to the site AND/OR utilized on the site:** (Note- this would include manure that is generated on the site by the importers animals, etc.) None
 - **If other manure is generated, imported and/or utilized, is it applied to the same acres as indicated in item “g” above (relating to “acres available”):** N/A

- **If other manure is generated, imported and/or utilized, is it applied during the same season as the imported manure: N/A**
- 6) The exporter will use a Manure Export Sheet to record all manure exported to the importer. These Manure Export Sheets are available from the county conservation district or the State Conservation Commission. Computer generated forms other than the manure export sheet may be used if they contain the same information as, and are reasonably similar in format to, the forms available from the State Conservation Commission or the conservation district.
 - 7) Records relating to the export of manure shall be prepared by the exporter in accordance with the following requirements of the Nutrient and Odor Management Act regulations:
 - a) A Manure Export Sheet shall be used to document all manure exports for their records
 - A copy of the Manure Export Sheet shall be provided to the importer
 - A copy of the Manure Export Sheet shall be retained on site by the exporter
 - b) When the exporter (or someone working for, or contracted by the exporter) applies the exported manure, the exporter shall maintain the following exported manure records:
 - Application dates, areas, rates and methods
 - c) Records shall be maintained by the exporter for a minimum of 3 years
 - d) A manure export informational packet (as supplied by the conservation district or State Conservation Commission) shall be provided to the importer by the time of the manure export. This information only needs to be provided once to the importer.
The manure export informational packet must include the following:
 - i. Exported Manure Informational Packet Guidance Sheet
 - ii. Nutrient Management Planning an Overview (Agronomy Facts 60)
 - iii. Manure Management for Environmental Protection
 - iv. Land Application of Manure- A supplement to the Manure Management Manual Plan Guidance
 - v. Manure Export Sheet
 - vi. Manure Transfer Summary Sheets
 - vii. Manure Field Stacking Requirements Fact Sheet
 - 8) Where applicable, the importer shall properly store manure received from the exporter in accordance with the provisions of the Manure Management Manual and the Pa Technical Guide and shall not cause contamination of surface or ground water. This shall include manure stacked in application fields which may not be retained in fields for > 120 days unless covered or otherwise protected .
 - 9) Manure received by the importer shall be applied to the land at the rate(s) and method(s) provided in the attached "Nutrient Balance Sheet(s)", or in accordance with a Nutrient Management Plan approved for the importing operation. If the importer wishes to change the lands used for imported manure, the nutrient balance sheet must be revised to reflect the changes and be submitted to the conservation district or State Conservation Commission (and DEP if the exporter is a CAFO) prior to implementing the changes.
 - 10) The importer shall comply with applicable manure application setbacks for the imported manure, as outlined in the Nutrient Balance Sheet map(s).
 - 11) For any lands not owned by the importer where the manure will be applied (i.e., rented lands), the importer hereby confirms that the importer has the authority to apply manure on those lands.

12) This agreement shall remain in full effect unless terminated by either party upon thirty days prior written notice to the other party. If this agreement is terminated, the exporter shall notify the county conservation district office that approved their nutrient management plan, of the termination.

Exporter Signature, Name and Date

John Bell (signature)
John W. Ditzel (name)
6/20/2018 (date)

Importer Signature, Name and Date

Gary Truckenmiller (signature)
Gary Truckenmiller / for Day Run Dairy (name)
6/20/2018 (date)

Nutrient Balance Sheet

Prepared for

Gary Truckenmiller
2145 Cronrath Road, Watsontown, PA 17777
570-713-4249

Prepared by

Todd C. Rush
#988-NMC
120 Lake Street, Ephrata PA 17522
570-764-7003



A handwritten signature in black ink, appearing to read "Todd C. Rush", is written over a horizontal line.

Nutrient Management Specialist or Broker 2 Signature

Date of Development

July 31, 2018

Exporter Information

John Rishel
1710 Vincent Avenue, Watsontown, PA 17777

County of Origin

Northumberland County

Nutrient Balance Worksheet Appendices

The following appendices need to accompany the Nutrient Balance Worksheets if applicable:

- Maps of fields where manure is to be applied including required manure application setbacks.
- Completed P-Index spreadsheet and Winter Matrix for each crop management unit (if using Manure Plan Basis: Option 3)

Nutrient Balance Sheet Summary

Importing Farm: Gary Truckenmiller

Whole Farm Note: None

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|---------------------------------------|--------|-------|---------------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R1_2 Corn Silage Liquid Manure Spring | R1_2 | 14.9 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R1_2 Corn Silage Liquid Manure Fall | R1_2 | 14.9 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R1_2 Corn Silage Liquid Manure Winter | R1_2 | 14.9 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R1_2 Corn Silage Solid Manure Spring | R1_2 | 14.9 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R1_2 Corn Silage Solid Manure Fall | R1_2 | 14.9 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R1_2 Corn Silage Solid Manure Winter | R1_2 | 14.9 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R3 Corn Silage Liquid Manure Spring | R3 | 4.3 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R3 Corn Silage Liquid Manure Fall | R3 | 4.3 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------------|--------|-------|---------------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R3 Corn Silage Liquid Manure Winter | R3 | 4.3 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R3 Corn Silage Solid Manure Spring | R3 | 4.3 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R3 Corn Silage Solid Manure Fall | R3 | 4.3 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R3 Corn Silage Solid Manure Winter | R3 | 4.3 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R4 Corn Silage Liquid Manure Spring | R4 | 3.9 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R4 Corn Silage Liquid Manure Fall | R4 | 3.9 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R4 Corn Silage Liquid Manure Winter | R4 | 3.9 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R4 Corn Silage Solid Manure Spring | R4 | 3.9 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R4 Corn Silage Solid Manure Fall | R4 | 3.9 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R4 Corn Silage Solid Manure Winter | R4 | 3.9 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R5B Corn Silage Liquid Manure Spring | R5B | 4.1 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------------|--------|-------|---------------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R5B Corn Silage Liquid Manure Fall | R5B | 4.1 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R5B Corn Silage Liquid Manure Winter | R5B | 4.1 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R5B Corn Silage Solid Manure Spring | R5B | 4.1 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R5B Corn Silage Solid Manure Fall | R5B | 4.1 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R5B Corn Silage Solid Manure Winter | R5B | 4.1 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R6 Corn Silage Liquid Manure Spring | R6 | 5.1 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R6 Corn Silage Liquid Manure Fall | R6 | 5.1 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R6 Corn Silage Liquid Manure Winter | R6 | 5.1 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R6 Corn Silage Solid Manure Spring | R6 | 5.1 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R6 Corn Silage Solid Manure Fall | R6 | 5.1 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R6 Corn Silage Solid Manure Winter | R6 | 5.1 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|-------------------------------------|--------|-------|---------------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R7 Corn Silage Liquid Manure Spring | R7 | 3.1 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R7 Corn Silage Liquid Manure Fall | R7 | 3.1 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R7 Corn Silage Liquid Manure Winter | R7 | 3.1 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R7 Corn Silage Solid Manure Spring | R7 | 3.1 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R7 Corn Silage Solid Manure Fall | R7 | 3.1 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R7 Corn Silage Solid Manure Winter | R7 | 3.1 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R8 Corn Silage Liquid Manure Spring | R8 | 9 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R8 Corn Silage Liquid Manure Fall | R8 | 9 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R8 Corn Silage Liquid Manure Winter | R8 | 9 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R8 Corn Silage Solid Manure Spring | R8 | 9 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R8 Corn Silage Solid Manure Fall | R8 | 9 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--|--------|-------|---------------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R8 Corn Silage Solid Manure Winter | R8 | 9 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R9 Corn Silage Liquid Manure Spring | R9 | 2.1 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R9 Corn Silage Liquid Manure Fall | R9 | 2.1 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R9 Corn Silage Liquid Manure Winter | R9 | 2.1 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R9 Corn Silage Solid Manure Spring | R9 | 2.1 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R9 Corn Silage Solid Manure Fall | R9 | 2.1 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R9 Corn Silage Solid Manure Winter | R9 | 2.1 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R10 Corn Silage Liquid Manure Spring | R10 | 6.2 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R10 Corn Silage Liquid Manure Fall | R10 | 6.2 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R10 Corn Silage Liquid Manure Winter | R10 | 6.2 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R10 Corn Silage Solid Manure Spring | R10 | 6.2 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------------|--------|-------|---------------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R10 Corn Silage Solid Manure Fall | R10 | 6.2 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R10 Corn Silage Solid Manure Winter | R10 | 6.2 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R11 Corn Silage Liquid Manure Spring | R11 | 2.2 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R11 Corn Silage Liquid Manure Fall | R11 | 2.2 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R11 Corn Silage Liquid Manure Winter | R11 | 2.2 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R11 Corn Silage Solid Manure Spring | R11 | 2.2 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R11 Corn Silage Solid Manure Fall | R11 | 2.2 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R11 Corn Silage Solid Manure Winter | R11 | 2.2 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R12 Corn Silage Liquid Manure Spring | R12 | 3.3 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R12 Corn Silage Liquid Manure Fall | R12 | 3.3 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R12 Corn Silage Liquid Manure Winter | R12 | 3.3 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------------|--------|-------|---------------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R12 Corn Silage Solid Manure Spring | R12 | 3.3 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R12 Corn Silage Solid Manure Fall | R12 | 3.3 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R12 Corn Silage Solid Manure Winter | R12 | 3.3 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R13 Corn Silage Liquid Manure Spring | R13 | 6.3 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R13 Corn Silage Liquid Manure Fall | R13 | 6.3 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R13 Corn Silage Liquid Manure Winter | R13 | 6.3 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R13 Corn Silage Solid Manure Spring | R13 | 6.3 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R13 Corn Silage Solid Manure Fall | R13 | 6.3 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R13 Corn Silage Solid Manure Winter | R13 | 6.3 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R14 Corn Silage Liquid Manure Spring | R14 | 4 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R14 Corn Silage Liquid Manure Fall | R14 | 4 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------------|--------|-------|---------------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R14 Corn Silage Liquid Manure Winter | R14 | 4 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R14 Corn Silage Solid Manure Spring | R14 | 4 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R14 Corn Silage Solid Manure Fall | R14 | 4 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R14 Corn Silage Solid Manure Winter | R14 | 4 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R15 Corn Silage Liquid Manure Spring | R15 | 3.6 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R15 Corn Silage Liquid Manure Fall | R15 | 3.6 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R15 Corn Silage Liquid Manure Winter | R15 | 3.6 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R15 Corn Silage Solid Manure Spring | R15 | 3.6 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R15 Corn Silage Solid Manure Fall | R15 | 3.6 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R15 Corn Silage Solid Manure Winter | R15 | 3.6 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R16 Corn Silage Liquid Manure Spring | R16 | 3.3 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------------|--------|-------|---------------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R16 Corn Silage Liquid Manure Fall | R16 | 3.3 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R16 Corn Silage Liquid Manure Winter | R16 | 3.3 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R16 Corn Silage Solid Manure Spring | R16 | 3.3 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R16 Corn Silage Solid Manure Fall | R16 | 3.3 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R16 Corn Silage Solid Manure Winter | R16 | 3.3 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R17 Corn Silage Liquid Manure Spring | R17 | 2.2 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R17 Corn Silage Liquid Manure Fall | R17 | 2.2 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R17 Corn Silage Liquid Manure Winter | R17 | 2.2 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R17 Corn Silage Solid Manure Spring | R17 | 2.2 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R17 Corn Silage Solid Manure Fall | R17 | 2.2 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R17 Corn Silage Solid Manure Winter | R17 | 2.2 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NBS Summary Notes

Importing Farm: Gary Truckenmiller

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---------------------------------------|---------------------------|----------------------|--------------------------------------|--|--|
| R1_2 Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R1_2 Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R1_2 Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R1_2 Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R1_2 Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R1_2 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R3 Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R3 Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R3 Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R3 Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--------------------------------------|---------------------------|----------------------|--------------------------------------|--|--|
| R3 Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R3 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R4 Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R4 Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R4 Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R4 Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R4 Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R4 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R5B Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R5B Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--|---------------------------|----------------------|--------------------------------------|--|--|
| R5B Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R5B Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R5B Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R5B Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R6 Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R6 Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R6 Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R6 Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R6 Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R6 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--|---------------------------|----------------------|--------------------------------------|--|--|
| R8 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R9 Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R9 Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R9 Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R9 Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R9 Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R9 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R10 Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R10 Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R10 Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--------------------------------------|---------------------------|----------------------|--------------------------------------|--|--|
| R10 Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R10 Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R10 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R11 Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R11 Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R11 Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R11 Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R11 Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R11 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R12 Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R12 Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--|---------------------------|----------------------|--------------------------------------|--|--|
| R12 Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R12 Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R12 Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R12 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R13 Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R13 Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R13 Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R13 Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R13 Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R13 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--------------------------------------|---------------------------|----------------------|--------------------------------------|--|--|
| R14 Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R14 Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R14 Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R14 Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R14 Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R14 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R15 Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R15 Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R15 Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R15 Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R15 Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--|---------------------------|----------------------|--------------------------------------|--|--|
| R15 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R16 Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R16 Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R16 Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may not be applied to this field if it is snow or ice covered. |
| R16 Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R16 Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R16 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R17 Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R17 Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R17 Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---|---------------------------|---------------------|--------------------------------------|--|--|
| R17 Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R17 Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R17 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| Nutrient Balance Sheets | R1_2 Corn Silage Liquid Manure Spring | | | R1_2 Corn Silage Liquid Manure Fall | | | R1_2 Corn Silage Liquid Manure Winter | | | R1_2 Corn Silage Solid Manure Spring | | | R1_2 Corn Silage Solid Manure Fall | | | R1_2 Corn Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | R1_2 | | | R1_2 | | | R1_2 | | | R1_2 | | | R1_2 | | |
| Fields | 14.9 | | | 14.9 | | | 14.9 | | | 14.9 | | | 14.9 | | | 14.9 | | |
| Acres | 14.9 | | | 14.9 | | | 14.9 | | | 14.9 | | | 14.9 | | | 14.9 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 223 | | | 223 | | | 223 | | | 223 | | | 223 | | | 223 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | 40 | | | 40 | | | 56 | | | 36 | | | 36 | | | 49 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | | | R3 Corn Silage Liquid Manure Spring | | | R3 Corn Silage Liquid Manure Fall | | | R3 Corn Silage Liquid Manure Winter | | | R3 Corn Silage Solid Manure Spring | | | R3 Corn Silage Solid Manure Fall | | | R3 Corn Silage Solid Manure Winter | | |
|--|--|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | | | |
| Fields | | | | R3 | | | R3 | | | R3 | | | R3 | | | R3 | | | R3 | | |
| Acres | | | | 4.3 | | | 4.3 | | | 4.3 | | | 4.3 | | | 4.3 | | | 4.3 | | |
| NBS Option | | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | | | 157 | | | 157 | | | 157 | | | 157 | | | 157 | | | 157 | | |
| P Index Part A Evaluation | | | | | | | | | | Winter | | | | | | | | | Winter | | |
| Part A Result | | | | N Based | | | N Based | | | Part B | | | N Based | | | N Based | | | Part B | | |
| Crop | | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | | | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | | | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | | | | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | | | Select Method | | | Select Method | | | Surface app. when frozen/snow covered | | | Select Method | | | Select Method | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | | | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | | | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | | | | | | | | | | 50 | | | | | | | | | 43 | | |
| Planned Manure Rate (ton or gal/A) | | | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | | | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | | | | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | | | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R4 Corn Silage Liquid Manure Spring | | | R4 Corn Silage Liquid Manure Fall | | | R4 Corn Silage Liquid Manure Winter | | | R4 Corn Silage Solid Manure Spring | | | R4 Corn Silage Solid Manure Fall | | | R4 Corn Silage Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R4 | | | R4 | | | R4 | | | R4 | | | R4 | | | R4 | | |
| Acres | | 3.9 | | | 3.9 | | | 3.9 | | | 3.9 | | | 3.9 | | | 3.9 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 335 | | | 335 | | | 335 | | | 335 | | | 335 | | | 335 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | | 49 | | | 49 | | | 64 | | | 45 | | | 45 | | | 57 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R5B Corn Silage Liquid Manure Spring | | | R5B Corn Silage Liquid Manure Fall | | | R5B Corn Silage Liquid Manure Winter | | | R5B Corn Silage Solid Manure Spring | | | R5B Corn Silage Solid Manure Fall | | | R5B Corn Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | |
| Fields | R5B | | | R5B | | | R5B | | | R5B | | | R5B | | | R5B | | |
| Acres | 4.1 | | | 4.1 | | | 4.1 | | | 4.1 | | | 4.1 | | | 4.1 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 329 | | | 329 | | | 329 | | | 329 | | | 329 | | | 329 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | 49 | | | 49 | | | 64 | | | 44 | | | 44 | | | 57 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R6 Corn Silage Liquid Manure Spring | | | R6 Corn Silage Liquid Manure Fall | | | R6 Corn Silage Liquid Manure Winter | | | R6 Corn Silage Solid Manure Spring | | | R6 Corn Silage Solid Manure Fall | | | R6 Corn Silage Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R6 | | | R6 | | | R6 | | | R6 | | | R6 | | | R6 | | |
| Acres | | 5.1 | | | 5.1 | | | 5.1 | | | 5.1 | | | 5.1 | | | 5.1 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 370 | | | 370 | | | 370 | | | 370 | | | 370 | | | 370 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | | 52 | | | 52 | | | 67 | | | 48 | | | 48 | | | 60 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R7 Corn Silage Liquid Manure Spring | | | R7 Corn Silage Liquid Manure Fall | | | R7 Corn Silage Liquid Manure Winter | | | R7 Corn Silage Solid Manure Spring | | | R7 Corn Silage Solid Manure Fall | | | R7 Corn Silage Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R7 | | | R7 | | | R7 | | | R7 | | | R7 | | | R7 | | |
| Acres | | 3.1 | | | 3.1 | | | 3.1 | | | 3.1 | | | 3.1 | | | 3.1 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 355 | | | 355 | | | 355 | | | 355 | | | 355 | | | 355 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | | 51 | | | 51 | | | 66 | | | 46 | | | 46 | | | 59 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R8 Corn Silage Liquid Manure Spring | | | R8 Corn Silage Liquid Manure Fall | | | R8 Corn Silage Liquid Manure Winter | | | R8 Corn Silage Solid Manure Spring | | | R8 Corn Silage Solid Manure Fall | | | R8 Corn Silage Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R8 | | | R8 | | | R8 | | | R8 | | | R8 | | | R8 | | |
| Acres | | 9.0 | | | 9.0 | | | 9.0 | | | 9.0 | | | 9.0 | | | 9.0 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 208 | | | 208 | | | 208 | | | 208 | | | 208 | | | 208 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | | 39 | | | 39 | | | 54 | | | 35 | | | 35 | | | 47 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | | R9 Corn Silage Liquid Manure Spring | | | R9 Corn Silage Liquid Manure Fall | | | R9 Corn Silage Liquid Manure Winter | | | R9 Corn Silage Solid Manure Spring | | | R9 Corn Silage Solid Manure Fall | | | R9 Corn Silage Solid Manure Winter | | |
|--|--|--|-------------------------------------|--|--|-----------------------------------|--|--|-------------------------------------|--|--|------------------------------------|--|--|----------------------------------|--|--|------------------------------------|--|--|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | | |
| Fields | | | | | | | | | | | | | | | | | | | | |
| Acres | | | | | | | | | | | | | | | | | | | | |
| NBS Option | | | | | | | | | | | | | | | | | | | | |
| P Banking | | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P | | | | | | | | | | | | | | | | | | | | |
| For Option 2 enter maximum Soil Test | | | | | | | | | | | | | | | | | | | | |
| For Option 3 enter soil test for PI | | | | | | | | | | | | | | | | | | | | |
| P Index Part A Evaluation | | | | | | | | | | | | | | | | | | | | |
| Part A Result | | | | | | | | | | | | | | | | | | | | |
| Crop | | | | | | | | | | | | | | | | | | | | |
| Planned Yield | | | | | | | | | | | | | | | | | | | | |
| Crop Removal Recommendations (LB/A) | | | | | | | | | | | | | | | | | | | | |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) | | | | | | | | | | | | | | | | | | | | |
| (Nutrients applied regardless of manure) | | | | | | | | | | | | | | | | | | | | |
| P Index Application Method | | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | | | | | | | | | | | | | | | | | | | |
| Manure History Description | | | | | | | | | | | | | | | | | | | | |
| Residual Manure N (lb/A) | | | | | | | | | | | | | | | | | | | | |
| Legume History Description | | | | | | | | | | | | | | | | | | | | |
| Residual Legume N (lb/A) | | | | | | | | | | | | | | | | | | | | |
| Net Nutrients Required (lb/A) | | | | | | | | | | | | | | | | | | | | |
| Manure Group | | | | | | | | | | | | | | | | | | | | |
| Units | | | | | | | | | | | | | | | | | | | | |
| Manure Nutrient Content | | | | | | | | | | | | | | | | | | | | |
| (lbs/ton or 1000 gal) | | | | | | | | | | | | | | | | | | | | |
| Application Season: Management | | | | | | | | | | | | | | | | | | | | |
| (Incorporation, cover crops, etc.) | | | | | | | | | | | | | | | | | | | | |
| Availability Factors | | | | | | | | | | | | | | | | | | | | |
| (Total N or NH4-N & Organic N) | | | | | | | | | | | | | | | | | | | | |
| P Index Application Method | | | | | | | | | | | | | | | | | | | | |
| N Balanced Manure Rate (ton; gal/A) | | | | | | | | | | | | | | | | | | | | |
| P Removal Balance Manure Rate | | | | | | | | | | | | | | | | | | | | |
| (ton or gal/A; If required by P Index) | | | | | | | | | | | | | | | | | | | | |
| P Index Value | | | | | | | | | | | | | | | | | | | | |
| Planned Manure Rate (ton or gal/A) | | | | | | | | | | | | | | | | | | | | |
| Nutrients Applied at Planned Manure Rate | | | | | | | | | | | | | | | | | | | | |
| (lb/A) | | | | | | | | | | | | | | | | | | | | |
| Nutrient Balance after Manure | | | | | | | | | | | | | | | | | | | | |
| Supplemental Fertilizer (lb/A) | | | | | | | | | | | | | | | | | | | | |
| P Index Application Method | | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | | | | | | | | | | | | | | | | | | | |
| Multiple Application | | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | | | | | | | | | | | | | | | | | | | |

| Nutrient Balance Sheets | | R10 Corn Silage Liquid Manure Spring | | | R10 Corn Silage Liquid Manure Fall | | | R10 Corn Silage Liquid Manure Winter | | | R10 Corn Silage Solid Manure Spring | | | R10 Corn Silage Solid Manure Fall | | | R10 Corn Silage Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R10 | | | R10 | | | R10 | | | R10 | | | R10 | | | R10 | | |
| Acres | | 6.2 | | | 6.2 | | | 6.2 | | | 6.2 | | | 6.2 | | | 6.2 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 326 | | | 326 | | | 326 | | | 326 | | | 326 | | | 326 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | | 50 | | | 50 | | | 65 | | | 45 | | | 45 | | | 58 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R11 Corn Silage Liquid Manure Spring | | | R11 Corn Silage Liquid Manure Fall | | | R11 Corn Silage Liquid Manure Winter | | | R11 Corn Silage Solid Manure Spring | | | R11 Corn Silage Solid Manure Fall | | | R11 Corn Silage Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R11 | | | R11 | | | R11 | | | R11 | | | R11 | | | R11 | | |
| Acres | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 268 | | | 268 | | | 268 | | | 268 | | | 268 | | | 268 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | | 45 | | | 45 | | | 61 | | | 41 | | | 41 | | | 53 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R12 Corn Silage Liquid Manure Spring | | | R12 Corn Silage Liquid Manure Fall | | | R12 Corn Silage Liquid Manure Winter | | | R12 Corn Silage Solid Manure Spring | | | R12 Corn Silage Solid Manure Fall | | | R12 Corn Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | |
| Fields | R12 | | | R12 | | | R12 | | | R12 | | | R12 | | | R12 | | |
| Acres | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 270 | | | 270 | | | 270 | | | 270 | | | 270 | | | 270 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | 45 | | | 45 | | | 61 | | | 41 | | | 41 | | | 53 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R13 Corn Silage Liquid Manure Spring | | | R13 Corn Silage Liquid Manure Fall | | | R13 Corn Silage Liquid Manure Winter | | | R13 Corn Silage Solid Manure Spring | | | R13 Corn Silage Solid Manure Fall | | | R13 Corn Silage Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R13 | | | R13 | | | R13 | | | R13 | | | R13 | | | R13 | | |
| Acres | | 6.3 | | | 6.3 | | | 6.3 | | | 6.3 | | | 6.3 | | | 6.3 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 312 | | | 312 | | | 312 | | | 312 | | | 312 | | | 312 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | | 48 | | | 48 | | | 64 | | | 44 | | | 44 | | | 57 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R14 Corn Silage Liquid Manure Spring | | | R14 Corn Silage Liquid Manure Fall | | | R14 Corn Silage Liquid Manure Winter | | | R14 Corn Silage Solid Manure Spring | | | R14 Corn Silage Solid Manure Fall | | | R14 Corn Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | |
| Fields | R14 | | | R14 | | | R14 | | | R14 | | | R14 | | | R14 | | |
| Acres | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | 53 | | | 53 | | | 71 | | | 48 | | | 48 | | | 63 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R15 Corn Silage Liquid Manure Spring | | | R15 Corn Silage Liquid Manure Fall | | | R15 Corn Silage Liquid Manure Winter | | | R15 Corn Silage Solid Manure Spring | | | R15 Corn Silage Solid Manure Fall | | | R15 Corn Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | |
| Fields | R15 | | | R15 | | | R15 | | | R15 | | | R15 | | | R15 | | |
| Acres | 3.6 | | | 3.6 | | | 3.6 | | | 3.6 | | | 3.6 | | | 3.6 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | 53 | | | 53 | | | 71 | | | 48 | | | 48 | | | 63 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R16 Corn Silage Liquid Manure Spring | | | R16 Corn Silage Liquid Manure Fall | | | R16 Corn Silage Liquid Manure Winter | | | R16 Corn Silage Solid Manure Spring | | | R16 Corn Silage Solid Manure Fall | | | R16 Corn Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | |
| Fields | R16 | | | R16 | | | R16 | | | R16 | | | R16 | | | R16 | | |
| Acres | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 423 | | | 423 | | | 423 | | | 423 | | | 423 | | | 423 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Nov - Mar: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | 66 | | | 66 | | | 75 | | | 61 | | | 61 | | | 76 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R17 Corn Silage Liquid Manure Spring | | | R17 Corn Silage Liquid Manure Fall | | | R17 Corn Silage Liquid Manure Winter | | | R17 Corn Silage Solid Manure Spring | | | R17 Corn Silage Solid Manure Fall | | | R17 Corn Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | |
| Fields | R17 | | | R17 | | | R17 | | | R17 | | | R17 | | | R17 | | |
| Acres | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 256 | | | 256 | | | 256 | | | 256 | | | 256 | | | 256 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | 51 | | | 51 | | | 69 | | | 46 | | | 46 | | | 60 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

Phosphorus Index

[Go to NBS Input](#)

[Go to NBS Index](#)

Pennsylvania P Index Version 2

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | CMU/Field ID | R1_2 Corn Silage Liquid Manure Spring |
|--|---|--|---|---|---|---|---------------------------------------|
| Is the CMU in a Special Protection watershed? | | Is the CMU in a Special Protection watershed? | | | | If the answer is Yes to <u>any</u> of these questions, Part B must be used. | No |
| A significant farm management change as defined by Act 38? | | Is there a significant farm management change as defined by Act 38? | | | | | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | | Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) | | | | | 223 |
| Contributing Distance from CMU to receiving water <150 ft.? | | Is the Contributing Distance from this CMU to receiving water less than 150 ft.? | | | | | No |
| Is winter manure application planned for this field ? | | Is winter manure application planned for this field ? | | | | | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | 223 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | | 45 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - |
| SUPPLEMENTAL P FERTILIZER | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | | 0 |
| MANURE P RATE | | Manure P (lb P2O5/acre) | | | | | 122 |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | 0.6 |
| P SOURCE COEFFICIENT ³ | | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | | 59 |
| Source Factor Sum | | | | | | | 104 |
| PART B: TRANSPORT FACTORS EROSION | | Soil Loss (ton/acre/yr) | | | | | 0.68 |
| RUNOFF POTENTIAL | 0 <i>Drainage Class is Excessively</i> | 2 <i>Drainage Class is Somewhat Excessively</i> | 4 <i>Drainage Class is Well/Moderately Well</i> | 6 <i>Drainage Class is Somewhat Poorly</i> | 8 <i>Drainage Class is Poorly/Very Poorly</i> | | 4 |
| SUBSURFACE DRAINAGE | 0 None | | 1 Random | | 2 ¹ Patterned | | 0 |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | | 5 |
| MODIFIED CONNECTIVITY | 0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | | 1.0 |
| Transport Sum x Modified Connectivity / 24 | | | | | | | 0.20 |
| P Index Value = 2 x Source x Transport | | | | | | | 40 |

Low: 59 or less
Nitrogen based management

Medium: 60 to 79
Nitrogen based management

High: 80 to 99
Phosphorus limited to crop removal

Very High: 100 or greater
No Phosphorus applied

1 OR rapidly permeable soil near a stream

2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R1_2 Corn Silage Liquid Manure Fall | R1_2 Corn Silage Liquid Manure Winter | R1_2 Corn Silage Solid Manure Spring | R1_2 Corn Silage Solid Manure Fall | R1_2 Corn Silage Solid Manure Winter | R3 Corn Silage Liquid Manure Winter | R3 Corn Silage Solid Manure Winter |
|--|-------------------------------------|---------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|-------------------------------------|------------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 223 | 223 | 223 | 223 | 223 | 157 | 157 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | Yes | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 223 | 223 | 223 | 223 | 223 | 157 | 157 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 45 | 45 | 45 | 45 | 45 | 31 | 31 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 100 | 100 | 100 | 122 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 1 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 98 | 48 | 48 | 80 | 98 | 80 |
| Source Factor Sum | 104 | 143 | 93 | 93 | 125 | 129 | 111 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 40 | 56 | 36 | 36 | 49 | 50 | 43 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R4 Corn Silage Liquid Manure Spring | R4 Corn Silage Liquid Manure Fall | R4 Corn Silage Liquid Manure Winter | R4 Corn Silage Solid Manure Spring | R4 Corn Silage Solid Manure Fall | R4 Corn Silage Solid Manure Winter | R5B Corn Silage Liquid Manure Spring |
|--|-------------------------------------|-----------------------------------|-------------------------------------|------------------------------------|----------------------------------|------------------------------------|--------------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 335 | 335 | 335 | 335 | 335 | 335 | 329 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 335 | 335 | 335 | 335 | 335 | 335 | 329 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 67 | 67 | 67 | 67 | 67 | 67 | 66 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 122 | 100 | 100 | 100 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 59 | 98 | 48 | 48 | 80 | 59 |
| Source Factor Sum | 126 | 126 | 165 | 115 | 115 | 147 | 125 |
| PART B: TRANSPORT FACTORS EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 49 | 49 | 64 | 45 | 45 | 57 | 49 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R5B Corn Silage Liquid Manure Fall | R5B Corn Silage Liquid Manure Winter | R5B Corn Silage Solid Manure Spring | R5B Corn Silage Solid Manure Fall | R5B Corn Silage Solid Manure Winter | R6 Corn Silage Liquid Manure Spring | R6 Corn Silage Liquid Manure Fall |
|--|------------------------------------|--------------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 329 | 329 | 329 | 329 | 329 | 370 | 370 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 329 | 329 | 329 | 329 | 329 | 370 | 370 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 66 | 66 | 66 | 66 | 66 | 74 | 74 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 100 | 100 | 100 | 122 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 98 | 48 | 48 | 80 | 59 | 59 |
| Source Factor Sum | 125 | 164 | 114 | 114 | 146 | 133 | 133 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 49 | 64 | 44 | 44 | 57 | 52 | 52 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R6 Corn Silage Liquid Manure Winter | R6 Corn Silage Solid Manure Spring | R6 Corn Silage Solid Manure Fall | R6 Corn Silage Solid Manure Winter | R7 Corn Silage Liquid Manure Spring | R7 Corn Silage Liquid Manure Fall | R7 Corn Silage Liquid Manure Winter |
|--|-------------------------------------|------------------------------------|----------------------------------|------------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 370 | 370 | 370 | 370 | 355 | 355 | 355 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 370 | 370 | 370 | 370 | 355 | 355 | 355 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 74 | 74 | 74 | 74 | 71 | 71 | 71 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 100 | 100 | 100 | 122 | 122 | 122 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 98 | 48 | 48 | 80 | 59 | 59 | 98 |
| Source Factor Sum | 172 | 122 | 122 | 154 | 130 | 130 | 169 |
| PART B: TRANSPORT FACTORS EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 67 | 48 | 48 | 60 | 51 | 51 | 66 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R7 Corn Silage Solid Manure Spring | R7 Corn Silage Solid Manure Fall | R7 Corn Silage Solid Manure Winter | R8 Corn Silage Liquid Manure Spring | R8 Corn Silage Liquid Manure Fall | R8 Corn Silage Liquid Manure Winter | R8 Corn Silage Solid Manure Spring |
|--|------------------------------------|----------------------------------|------------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|------------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 355 | 355 | 355 | 208 | 208 | 208 | 208 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 355 | 355 | 355 | 208 | 208 | 208 | 208 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 71 | 71 | 71 | 42 | 42 | 42 | 42 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 100 | 122 | 122 | 122 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 48 | 48 | 80 | 59 | 59 | 98 | 48 |
| Source Factor Sum | 119 | 119 | 151 | 101 | 101 | 140 | 90 |
| PART B: TRANSPORT FACTORS EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 46 | 46 | 59 | 39 | 39 | 54 | 35 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R8 Corn Silage Solid Manure Fall | R8 Corn Silage Solid Manure Winter | R9 Corn Silage Liquid Manure Spring | R9 Corn Silage Liquid Manure Fall | R9 Corn Silage Liquid Manure Winter | R9 Corn Silage Solid Manure Spring | R9 Corn Silage Solid Manure Fall |
|--|----------------------------------|------------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|------------------------------------|----------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 208 | 208 | 269 | 269 | 269 | 269 | 269 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 208 | 208 | 269 | 269 | 269 | 269 | 269 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 42 | 42 | 54 | 54 | 54 | 54 | 54 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 122 | 122 | 122 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 48 | 80 | 59 | 59 | 98 | 48 | 48 |
| Source Factor Sum | 90 | 122 | 113 | 113 | 152 | 102 | 102 |
| PART B: TRANSPORT FACTORS EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 35 | 47 | 44 | 44 | 59 | 40 | 40 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R9 Corn Silage Solid Manure Winter | R10 Corn Silage Liquid Manure Spring | R10 Corn Silage Liquid Manure Fall | R10 Corn Silage Liquid Manure Winter | R10 Corn Silage Solid Manure Spring | R10 Corn Silage Solid Manure Fall | R10 Corn Silage Solid Manure Winter |
|--|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 269 | 326 | 326 | 326 | 326 | 326 | 326 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 269 | 326 | 326 | 326 | 326 | 326 | 326 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 54 | 65 | 65 | 65 | 65 | 65 | 65 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 122 | 122 | 122 | 100 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 80 | 59 | 59 | 98 | 48 | 48 | 80 |
| Source Factor Sum | 134 | 124 | 124 | 163 | 113 | 113 | 145 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 52 | 50 | 50 | 65 | 45 | 45 | 58 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R11 Corn Silage Liquid Manure Spring | R11 Corn Silage Liquid Manure Fall | R11 Corn Silage Liquid Manure Winter | R11 Corn Silage Solid Manure Spring | R11 Corn Silage Solid Manure Fall | R11 Corn Silage Solid Manure Winter | R12 Corn Silage Liquid Manure Spring |
|--|--------------------------------------|------------------------------------|--------------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|--------------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 268 | 268 | 268 | 268 | 268 | 268 | 270 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 268 | 268 | 268 | 268 | 268 | 268 | 270 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 122 | 100 | 100 | 100 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 59 | 98 | 48 | 48 | 80 | 59 |
| Source Factor Sum | 113 | 113 | 152 | 102 | 102 | 134 | 113 |
| PART B: TRANSPORT FACTORS EROSION | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 45 | 45 | 61 | 41 | 41 | 53 | 45 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R12 Corn Silage Liquid Manure Fall | R12 Corn Silage Liquid Manure Winter | R12 Corn Silage Solid Manure Spring | R12 Corn Silage Solid Manure Fall | R12 Corn Silage Solid Manure Winter | R13 Corn Silage Liquid Manure Spring | R13 Corn Silage Liquid Manure Fall |
|--|------------------------------------|--------------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|--------------------------------------|------------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 270 | 270 | 270 | 270 | 270 | 312 | 312 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 270 | 270 | 270 | 270 | 270 | 312 | 312 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 54 | 54 | 54 | 54 | 54 | 62 | 62 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 100 | 100 | 100 | 122 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 98 | 48 | 48 | 80 | 59 | 59 |
| Source Factor Sum | 113 | 152 | 102 | 102 | 134 | 121 | 121 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 45 | 61 | 41 | 41 | 53 | 48 | 48 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R13 Corn Silage Liquid Manure Winter | R13 Corn Silage Solid Manure Spring | R13 Corn Silage Solid Manure Fall | R13 Corn Silage Solid Manure Winter | R14 Corn Silage Liquid Manure Spring | R14 Corn Silage Liquid Manure Fall | R14 Corn Silage Liquid Manure Winter |
|--|--------------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 312 | 312 | 312 | 312 | 283 | 283 | 283 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 312 | 312 | 312 | 312 | 283 | 283 | 283 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 62 | 62 | 62 | 62 | 57 | 57 | 57 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 100 | 100 | 100 | 122 | 122 | 122 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 98 | 48 | 48 | 80 | 59 | 59 | 98 |
| Source Factor Sum | 160 | 110 | 110 | 142 | 116 | 116 | 155 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.791 | 0.791 | 0.791 | 0.791 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage | 5 | 5 | 5 | 5 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 64 | 44 | 44 | 57 | 53 | 53 | 71 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R14 Corn Silage Solid Manure Spring | R14 Corn Silage Solid Manure Fall | R14 Corn Silage Solid Manure Winter | R15 Corn Silage Liquid Manure Spring | R15 Corn Silage Liquid Manure Fall | R15 Corn Silage Liquid Manure Winter | R15 Corn Silage Solid Manure Spring |
|--|-------------------------------------|-----------------------------------|-------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|-------------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 283 | 283 | 283 | 283 | 283 | 283 | 283 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 283 | 283 | 283 | 283 | 283 | 283 | 283 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 57 | 57 | 57 | 57 | 57 | 57 | 57 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 100 | 122 | 122 | 122 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 48 | 48 | 80 | 59 | 59 | 98 | 48 |
| Source Factor Sum | 105 | 105 | 137 | 116 | 116 | 155 | 105 |
| PART B: TRANSPORT FACTORS EROSION | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 48 | 48 | 63 | 53 | 53 | 71 | 48 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R15 Corn Silage Solid Manure Fall | R15 Corn Silage Solid Manure Winter | R16 Corn Silage Liquid Manure Spring | R16 Corn Silage Liquid Manure Fall | R16 Corn Silage Liquid Manure Winter | R16 Corn Silage Solid Manure Spring | R16 Corn Silage Solid Manure Fall |
|--|-----------------------------------|-------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|-------------------------------------|-----------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 283 | 283 | 423 | 423 | 423 | 423 | 423 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 283 | 283 | 423 | 423 | 423 | 423 | 423 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 57 | 57 | 85 | 85 | 85 | 85 | 85 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 122 | 122 | 122 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 0.8 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 48 | 80 | 59 | 59 | 78 | 48 | 48 |
| Source Factor Sum | 105 | 137 | 144 | 144 | 163 | 133 | 133 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 48 | 63 | 66 | 66 | 75 | 61 | 61 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R16 Corn Silage Solid Manure Winter | R17 Corn Silage Liquid Manure Spring | R17 Corn Silage Liquid Manure Fall | R17 Corn Silage Liquid Manure Winter | R17 Corn Silage Solid Manure Spring | R17 Corn Silage Solid Manure Fall | R17 Corn Silage Solid Manure Winter |
|--|-------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 423 | 256 | 256 | 256 | 256 | 256 | 256 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 423 | 256 | 256 | 256 | 256 | 256 | 256 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 85 | 51 | 51 | 51 | 51 | 51 | 51 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 122 | 122 | 122 | 100 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 80 | 59 | 59 | 98 | 48 | 48 | 80 |
| Source Factor Sum | 165 | 110 | 110 | 149 | 99 | 99 | 131 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 76 | 51 | 51 | 69 | 46 | 46 | 60 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Nutrient Balance Sheet Summary

Importing Farm: Gary Truckenmiller

Whole Farm Note: None

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------------|--------|-------|---------------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R18 Corn Silage Liquid Manure Spring | R18 | 5 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R18 Corn Silage Liquid Manure Fall | R18 | 5 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R18 Corn Silage Liquid Manure Winter | R18 | 5 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R18 Corn Silage Solid Manure Spring | R18 | 5 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R18 Corn Silage Solid Manure Fall | R18 | 5 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R18 Corn Silage Solid Manure Winter | R18 | 5 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R19 Corn Silage Liquid Manure Spring | R19 | 1.6 | Corn for Silage (No-till) | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R19 Corn Silage Liquid Manure Fall | R19 | 1.6 | Corn for Silage (No-till) | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------------|--------|-------|---------------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R19 Corn Silage Liquid Manure Winter | R19 | 1.6 | Corn for Silage (No-till) | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 43 | 0 | 0 | 0 | -22 | -102 |
| R19 Corn Silage Solid Manure Spring | R19 | 1.6 | Corn for Silage (No-till) | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R19 Corn Silage Solid Manure Fall | R19 | 1.6 | Corn for Silage (No-till) | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |
| R19 Corn Silage Solid Manure Winter | R19 | 1.6 | Corn for Silage (No-till) | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 69 | 0 | 32 | 0 | 0 | 0 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NBS Summary Notes

Importing Farm: Gary Truckenmiller

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--------------------------------------|---------------------------|----------------------|--------------------------------------|--|--|
| R18 Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R18 Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R18 Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R18 Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R18 Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R18 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R19 Corn Silage Liquid Manure Spring | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R19 Corn Silage Liquid Manure Fall | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R19 Corn Silage Liquid Manure Winter | Corn for Silage (No-till) | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R19 Corn Silage Solid Manure Spring | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---|---------------------------|---------------------|--------------------------------------|--|--|
| R19 Corn Silage Solid Manure Fall | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R19 Corn Silage Solid Manure Winter | Corn for Silage (No-till) | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| Nutrient Balance Sheets | R18 Corn Silage Liquid Manure Spring | | | R18 Corn Silage Liquid Manure Fall | | | R18 Corn Silage Liquid Manure Winter | | | R18 Corn Silage Solid Manure Spring | | | R18 Corn Silage Solid Manure Fall | | | R18 Corn Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | |
| Fields | R18 | | | R18 | | | R18 | | | R18 | | | R18 | | | R18 | | |
| Acres | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 166 | | | 166 | | | 166 | | | 166 | | | 166 | | | 166 | | |
| P Index Part A Evaluation | | | | | | | Winter | | | | | | | | | Winter | | |
| Part A Result | N Based | | | N Based | | | Part B | | | N Based | | | N Based | | | Part B | | |
| Crop | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | | | | | | Surface app. when frozen/snow covered | | | | | | | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | | | | | | | 72 | | | | | | | | | 62 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R19 Corn Silage Liquid Manure Spring | | | R19 Corn Silage Liquid Manure Fall | | | R19 Corn Silage Liquid Manure Winter | | | R19 Corn Silage Solid Manure Spring | | | R19 Corn Silage Solid Manure Fall | | | R19 Corn Silage Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R19 | | | R19 | | | R19 | | | R19 | | | R19 | | | R19 | | |
| Acres | | 1.6 | | | 1.6 | | | 1.6 | | | 1.6 | | | 1.6 | | | 1.6 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 293 | | | 293 | | | 293 | | | 293 | | | 293 | | | 293 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | | Corn for Silage (No-till) | | |
| Planned Yield | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | | 25 ton/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 | 175 | 100 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | | 50 | Soybeans, 50 bu/A | |
| Net Nutrients Required (lb/A) | | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 | 90 | 100 | 200 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 15,152 gal/A | | | 15,152 gal/A | | | 15,152 gal/A | | | 42 tons/A | | | 42 tons/A | | | 42 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 6,579 gal/A | | | 6,579 gal/A | | | 6,579 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | | Crop P Removal (lb/A) 100.0 | | |
| P Index Value | | 54 | | | 54 | | | 72 | | | 49 | | | 49 | | | 64 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 43 | -22 | -102 | 43 | -22 | -102 | 43 | -22 | -102 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| Supplemental Fertilizer (lb/A) | | 43 | 0 | 0 | 43 | 0 | 0 | 43 | 0 | 0 | 69 | 0 | 32 | 69 | 0 | 32 | 69 | 0 | 32 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -22 | -102 | 0 | -22 | -102 | 0 | -22 | -102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

Phosphorus Index

[Go to NBS Input](#)

[Go to NBS Index](#)

Pennsylvania P Index Version 2

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | CMU/Field ID | R18 Corn Silage Liquid Manure Winter |
|--|---|--|---|---|---|---|--------------------------------------|
| Is the CMU in a Special Protection watershed? | | Is the CMU in a Special Protection watershed? | | | | If the answer is Yes to <u>any</u> of these questions, Part B must be used. | No |
| A significant farm management change as defined by Act 38? | | Is there a significant farm management change as defined by Act 38? | | | | | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | | Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) | | | | | 166 |
| Contributing Distance from CMU to receiving water <150 ft.? | | Is the Contributing Distance from this CMU to receiving water less than 150 ft.? | | | | | No |
| Is winter manure application planned for this field ? | | Is winter manure application planned for this field ? | | | | | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | 166 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | | 33 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - |
| SUPPLEMENTAL P FERTILIZER | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | | 0 |
| MANURE P RATE | | Manure P (lb P2O5/acre) | | | | | 122 |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | 1 |
| P SOURCE COEFFICIENT ³ | | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | | 98 |
| Source Factor Sum | | | | | | | 131 |
| PART B: TRANSPORT FACTORS EROSION | | Soil Loss (ton/acre/yr) | | | | | 0.55 |
| RUNOFF POTENTIAL | 0 <i>Drainage Class is Excessively</i> | 2 <i>Drainage Class is Somewhat Excessively</i> | 4 <i>Drainage Class is Well/Moderately Well</i> | 6 <i>Drainage Class is Somewhat Poorly</i> | 8 <i>Drainage Class is Poorly/Very Poorly</i> | | 4 |
| SUBSURFACE DRAINAGE | 0 None | | 1 Random | | 2 ¹ Patterned | | 0 |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | | 2 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | | 7 |
| MODIFIED CONNECTIVITY | 0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | | 1.0 |
| Transport Sum x Modified Connectivity / 24 | | | | | | | 0.27 |
| P Index Value = 2 x Source x Transport | | | | | | | 72 |

Low: 59 or less
Nitrogen based management

Medium: 60 to 79
Nitrogen based management

High: 80 to 99
Phosphorus limited to crop removal

Very High: 100 or greater
No Phosphorus applied

1 OR rapidly permeable soil near a stream

2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R18 Corn Silage Solid Manure Winter | R19 Corn Silage Liquid Manure Spring | R19 Corn Silage Liquid Manure Fall | R19 Corn Silage Liquid Manure Winter | R19 Corn Silage Solid Manure Spring | R19 Corn Silage Solid Manure Fall | R19 Corn Silage Solid Manure Winter |
|--|-------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 166 | 293 | 293 | 293 | 293 | 293 | 293 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 166 | 293 | 293 | 293 | 293 | 293 | 293 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 33 | 59 | 59 | 59 | 59 | 59 | 59 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 122 | 122 | 122 | 100 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 80 | 59 | 59 | 98 | 48 | 48 | 80 |
| Source Factor Sum | 113 | 118 | 118 | 157 | 107 | 107 | 139 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.55 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage | 7 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.27 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 62 | 54 | 54 | 72 | 49 | 49 | 64 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Nutrient Balance Sheet Summary

Importing Farm: Gary Truckenmiller

Whole Farm Note: None

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--|--------|-------|--------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R1_2 Small Grain Silage Liquid Manure Spring | R1_2 | 14.9 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R1_2 Small Grain Silage Liquid Manure Fall | R1_2 | 14.9 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R1_2 Small Grain Silage Liquid Manure Winter | R1_2 | 14.9 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R1_2 Small Grain Silage Solid Manure Spring | R1_2 | 14.9 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R1_2 Small Grain Silage Solid Manure Fall | R1_2 | 14.9 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R1_2 Small Grain Silage Solid Manure Winter | R1_2 | 14.9 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |
| R3 Small Grain Silage Liquid Manure Spring | R3 | 4.3 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R3 Small Grain Silage Liquid Manure Fall | R3 | 4.3 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|---|--------|-------|--------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R3 Small Grain Silage Liquid Manure Winter | R3 | 4.3 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R3 Small Grain Silage Solid Manure Spring | R3 | 4.3 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R3 Small Grain Silage Solid Manure Fall | R3 | 4.3 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R3 Small Grain Silage Solid Manure Winter | R3 | 4.3 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |
| R4 Small Grain Silage Liquid Manure Spring | R4 | 3.9 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R4 Small Grain Silage Liquid Manure Fall | R4 | 3.9 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R4 Small Grain Silage Liquid Manure Winter | R4 | 3.9 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R4 Small Grain Silage Solid Manure Spring | R4 | 3.9 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R4 Small Grain Silage Solid Manure Fall | R4 | 3.9 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R4 Small Grain Silage Solid Manure Winter | R4 | 3.9 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |
| R5B Small Grain Silage Liquid Manure Spring | R5B | 4.1 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|---|--------|-------|--------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R5B Small Grain Silage Liquid Manure Fall | R5B | 4.1 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R5B Small Grain Silage Liquid Manure Winter | R5B | 4.1 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R5B Small Grain Silage Solid Manure Spring | R5B | 4.1 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R5B Small Grain Silage Solid Manure Fall | R5B | 4.1 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R5B Small Grain Silage Solid Manure Winter | R5B | 4.1 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |
| R6 Small Grain Silage Liquid Manure Spring | R6 | 5.1 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R6 Small Grain Silage Liquid Manure Fall | R6 | 5.1 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R6 Small Grain Silage Liquid Manure Winter | R6 | 5.1 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R6 Small Grain Silage Solid Manure Spring | R6 | 5.1 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R6 Small Grain Silage Solid Manure Fall | R6 | 5.1 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R6 Small Grain Silage Solid Manure Winter | R6 | 5.1 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--|--------|-------|--------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R7 Small Grain Silage Liquid Manure Spring | R7 | 3.1 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R7 Small Grain Silage Liquid Manure Fall | R7 | 3.1 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R7 Small Grain Silage Liquid Manure Winter | R7 | 3.1 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R7 Small Grain Silage Solid Manure Spring | R7 | 3.1 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R7 Small Grain Silage Solid Manure Fall | R7 | 3.1 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R7 Small Grain Silage Solid Manure Winter | R7 | 3.1 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |
| R8 Small Grain Silage Liquid Manure Spring | R8 | 9 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R8 Small Grain Silage Liquid Manure Fall | R8 | 9 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R8 Small Grain Silage Liquid Manure Winter | R8 | 9 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R8 Small Grain Silage Solid Manure Spring | R8 | 9 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R8 Small Grain Silage Solid Manure Fall | R8 | 9 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|---|--------|-------|--------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R8 Small Grain Silage Solid Manure Winter | R8 | 9 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |
| R9 Small Grain Silage Liquid Manure Spring | R9 | 2.1 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R9 Small Grain Silage Liquid Manure Fall | R9 | 2.1 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R9 Small Grain Silage Liquid Manure Winter | R9 | 2.1 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R9 Small Grain Silage Solid Manure Spring | R9 | 2.1 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R9 Small Grain Silage Solid Manure Fall | R9 | 2.1 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R9 Small Grain Silage Solid Manure Winter | R9 | 2.1 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |
| R10 Small Grain Silage Liquid Manure Spring | R10 | 6.2 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R10 Small Grain Silage Liquid Manure Fall | R10 | 6.2 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R10 Small Grain Silage Liquid Manure Winter | R10 | 6.2 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R10 Small Grain Silage Solid Manure Spring | R10 | 6.2 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|---|--------|-------|--------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R10 Small Grain Silage Solid Manure Fall | R10 | 6.2 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R10 Small Grain Silage Solid Manure Winter | R10 | 6.2 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |
| R11 Small Grain Silage Liquid Manure Spring | R11 | 2.2 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R11 Small Grain Silage Liquid Manure Fall | R11 | 2.2 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R11 Small Grain Silage Liquid Manure Winter | R11 | 2.2 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R11 Small Grain Silage Solid Manure Spring | R11 | 2.2 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R11 Small Grain Silage Solid Manure Fall | R11 | 2.2 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R11 Small Grain Silage Solid Manure Winter | R11 | 2.2 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |
| R12 Small Grain Silage Liquid Manure Spring | R12 | 3.3 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R12 Small Grain Silage Liquid Manure Fall | R12 | 3.3 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R12 Small Grain Silage Liquid Manure Winter | R12 | 3.3 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|---|--------|-------|--------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R12 Small Grain Silage Solid Manure Spring | R12 | 3.3 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R12 Small Grain Silage Solid Manure Fall | R12 | 3.3 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R12 Small Grain Silage Solid Manure Winter | R12 | 3.3 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |
| R13 Small Grain Silage Liquid Manure Spring | R13 | 6.3 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R13 Small Grain Silage Liquid Manure Fall | R13 | 6.3 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R13 Small Grain Silage Liquid Manure Winter | R13 | 6.3 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R13 Small Grain Silage Solid Manure Spring | R13 | 6.3 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R13 Small Grain Silage Solid Manure Fall | R13 | 6.3 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R13 Small Grain Silage Solid Manure Winter | R13 | 6.3 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |
| R14 Small Grain Silage Liquid Manure Spring | R14 | 4 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R14 Small Grain Silage Liquid Manure Fall | R14 | 4 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|---|--------|-------|--------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R14 Small Grain Silage Liquid Manure Winter | R14 | 4 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R14 Small Grain Silage Solid Manure Spring | R14 | 4 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R14 Small Grain Silage Solid Manure Fall | R14 | 4 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R14 Small Grain Silage Solid Manure Winter | R14 | 4 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |
| R15 Small Grain Silage Liquid Manure Spring | R15 | 3.6 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R15 Small Grain Silage Liquid Manure Fall | R15 | 3.6 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R15 Small Grain Silage Liquid Manure Winter | R15 | 3.6 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R15 Small Grain Silage Solid Manure Spring | R15 | 3.6 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R15 Small Grain Silage Solid Manure Fall | R15 | 3.6 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R15 Small Grain Silage Solid Manure Winter | R15 | 3.6 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |
| R16 Small Grain Silage Liquid Manure Spring | R16 | 3.3 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|---|--------|-------|--------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R16 Small Grain Silage Liquid Manure Fall | R16 | 3.3 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R16 Small Grain Silage Liquid Manure Winter | R16 | 3.3 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R16 Small Grain Silage Solid Manure Spring | R16 | 3.3 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R16 Small Grain Silage Solid Manure Fall | R16 | 3.3 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R16 Small Grain Silage Solid Manure Winter | R16 | 3.3 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |
| R17 Small Grain Silage Liquid Manure Spring | R17 | 2.2 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R17 Small Grain Silage Liquid Manure Fall | R17 | 2.2 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R17 Small Grain Silage Liquid Manure Winter | R17 | 2.2 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R17 Small Grain Silage Solid Manure Spring | R17 | 2.2 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R17 Small Grain Silage Solid Manure Fall | R17 | 2.2 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R17 Small Grain Silage Solid Manure Winter | R17 | 2.2 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NBS Summary Notes

Importing Farm: Gary Truckenmiller

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--|--------------------|----------------------|--------------------------------------|--|--|
| R1_2 Small Grain Silage Liquid Manure Spring | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R1_2 Small Grain Silage Liquid Manure Fall | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R1_2 Small Grain Silage Liquid Manure Winter | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R1_2 Small Grain Silage Solid Manure Spring | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R1_2 Small Grain Silage Solid Manure Fall | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R1_2 Small Grain Silage Solid Manure Winter | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R3 Small Grain Silage Liquid Manure Spring | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R3 Small Grain Silage Liquid Manure Fall | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R3 Small Grain Silage Liquid Manure Winter | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R3 Small Grain Silage Solid Manure Spring | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---|--------------------|----------------------|--------------------------------------|--|--|
| R3 Small Grain Silage Solid Manure Fall | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R3 Small Grain Silage Solid Manure Winter | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R4 Small Grain Silage Liquid Manure Spring | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R4 Small Grain Silage Liquid Manure Fall | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R4 Small Grain Silage Liquid Manure Winter | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R4 Small Grain Silage Solid Manure Spring | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R4 Small Grain Silage Solid Manure Fall | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R4 Small Grain Silage Solid Manure Winter | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R5B Small Grain Silage Liquid Manure Spring | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R5B Small Grain Silage Liquid Manure Fall | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---|--------------------|----------------------|--------------------------------------|--|--|
| R5B Small Grain Silage Liquid Manure Winter | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R5B Small Grain Silage Solid Manure Spring | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R5B Small Grain Silage Solid Manure Fall | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R5B Small Grain Silage Solid Manure Winter | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R6 Small Grain Silage Liquid Manure Spring | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R6 Small Grain Silage Liquid Manure Fall | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R6 Small Grain Silage Liquid Manure Winter | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R6 Small Grain Silage Solid Manure Spring | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R6 Small Grain Silage Solid Manure Fall | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R6 Small Grain Silage Solid Manure Winter | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---|--------------------|----------------------|--------------------------------------|--|--|
| R8 Small Grain Silage Solid Manure Winter | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R9 Small Grain Silage Liquid Manure Spring | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R9 Small Grain Silage Liquid Manure Fall | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R9 Small Grain Silage Liquid Manure Winter | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R9 Small Grain Silage Solid Manure Spring | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R9 Small Grain Silage Solid Manure Fall | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R9 Small Grain Silage Solid Manure Winter | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R10 Small Grain Silage Liquid Manure Spring | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R10 Small Grain Silage Liquid Manure Fall | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R10 Small Grain Silage Liquid Manure Winter | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---|--------------------|----------------------|--------------------------------------|--|--|
| R12 Small Grain Silage Liquid Manure Winter | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R12 Small Grain Silage Solid Manure Spring | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R12 Small Grain Silage Solid Manure Fall | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R12 Small Grain Silage Solid Manure Winter | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R13 Small Grain Silage Liquid Manure Spring | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R13 Small Grain Silage Liquid Manure Fall | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R13 Small Grain Silage Liquid Manure Winter | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R13 Small Grain Silage Solid Manure Spring | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R13 Small Grain Silage Solid Manure Fall | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R13 Small Grain Silage Solid Manure Winter | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---|--------------------|----------------------|--------------------------------------|--|--|
| R15 Small Grain Silage Solid Manure Winter | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R16 Small Grain Silage Liquid Manure Spring | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R16 Small Grain Silage Liquid Manure Fall | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R16 Small Grain Silage Liquid Manure Winter | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may not be applied to this field if it is snow or ice covered. |
| R16 Small Grain Silage Solid Manure Spring | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R16 Small Grain Silage Solid Manure Fall | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R16 Small Grain Silage Solid Manure Winter | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R17 Small Grain Silage Liquid Manure Spring | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R17 Small Grain Silage Liquid Manure Fall | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R17 Small Grain Silage Liquid Manure Winter | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--|--------------------|---------------------|--------------------------------------|--|--|
| R17 Small Grain Silage Solid Manure Spring | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R17 Small Grain Silage Solid Manure Fall | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R17 Small Grain Silage Solid Manure Winter | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| Nutrient Balance Sheets | R1_2 Small Grain Silage Liquid Manure Spring | | | R1_2 Small Grain Silage Liquid Manure Fall | | | R1_2 Small Grain Silage Liquid Manure Winter | | | R1_2 Small Grain Silage Solid Manure Spring | | | R1_2 Small Grain Silage Solid Manure Fall | | | R1_2 Small Grain Silage Solid Manure Winter | | |
|--|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | |
| Fields | R1_2 | | | R1_2 | | | R1_2 | | | R1_2 | | | R1_2 | | | R1_2 | | |
| Acres | 14.9 | | | 14.9 | | | 14.9 | | | 14.9 | | | 14.9 | | | 14.9 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 223 | | | 223 | | | 223 | | | 223 | | | 223 | | | 223 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 40 | | | 40 | | | 56 | | | 36 | | | 36 | | | 49 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R3 Small Grain Silage Liquid Manure Spring | | | R3 Small Grain Silage Liquid Manure Fall | | | R3 Small Grain Silage Liquid Manure Winter | | | R3 Small Grain Silage Solid Manure Spring | | | R3 Small Grain Silage Solid Manure Fall | | | R3 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | |
| Fields | R3 | | | R3 | | | R3 | | | R3 | | | R3 | | | R3 | | |
| Acres | 4.3 | | | 4.3 | | | 4.3 | | | 4.3 | | | 4.3 | | | 4.3 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 157 | | | 157 | | | 157 | | | 157 | | | 157 | | | 157 | | |
| P Index Part A Evaluation | | | | | | | Winter | | | | | | | | | Winter | | |
| Part A Result | N Based | | | N Based | | | Part B | | | N Based | | | N Based | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | Select Method | | | Select Method | | | Surface app. when frozen/snow covered | | | Select Method | | | Select Method | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | | | | | | | 50 | | | | | | | | | 43 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R4 Small Grain Silage Liquid Manure Spring | | | R4 Small Grain Silage Liquid Manure Fall | | | R4 Small Grain Silage Liquid Manure Winter | | | R4 Small Grain Silage Solid Manure Spring | | | R4 Small Grain Silage Solid Manure Fall | | | R4 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | |
| Fields | R4 | | | R4 | | | R4 | | | R4 | | | R4 | | | R4 | | |
| Acres | 3.9 | | | 3.9 | | | 3.9 | | | 3.9 | | | 3.9 | | | 3.9 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 335 | | | 335 | | | 335 | | | 335 | | | 335 | | | 335 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 49 | | | 49 | | | 64 | | | 45 | | | 45 | | | 57 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R5B Small Grain Silage Liquid Manure Spring | | | R5B Small Grain Silage Liquid Manure Fall | | | R5B Small Grain Silage Liquid Manure Winter | | | R5B Small Grain Silage Solid Manure Spring | | | R5B Small Grain Silage Solid Manure Fall | | | R5B Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | |
| Fields | R5B | | | R5B | | | R5B | | | R5B | | | R5B | | | R5B | | |
| Acres | 4.1 | | | 4.1 | | | 4.1 | | | 4.1 | | | 4.1 | | | 4.1 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 329 | | | 329 | | | 329 | | | 329 | | | 329 | | | 329 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 49 | | | 49 | | | 64 | | | 44 | | | 44 | | | 57 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R6 Small Grain Silage Liquid Manure Spring | | | R6 Small Grain Silage Liquid Manure Fall | | | R6 Small Grain Silage Liquid Manure Winter | | | R6 Small Grain Silage Solid Manure Spring | | | R6 Small Grain Silage Solid Manure Fall | | | R6 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | |
| Fields | R6 | | | R6 | | | R6 | | | R6 | | | R6 | | | R6 | | |
| Acres | 5.1 | | | 5.1 | | | 5.1 | | | 5.1 | | | 5.1 | | | 5.1 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 370 | | | 370 | | | 370 | | | 370 | | | 370 | | | 370 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 52 | | | 52 | | | 67 | | | 48 | | | 48 | | | 60 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R7 Small Grain Silage Liquid Manure Spring | | | R7 Small Grain Silage Liquid Manure Fall | | | R7 Small Grain Silage Liquid Manure Winter | | | R7 Small Grain Silage Solid Manure Spring | | | R7 Small Grain Silage Solid Manure Fall | | | R7 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | |
| Fields | R7 | | | R7 | | | R7 | | | R7 | | | R7 | | | R7 | | |
| Acres | 3.1 | | | 3.1 | | | 3.1 | | | 3.1 | | | 3.1 | | | 3.1 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 355 | | | 355 | | | 355 | | | 355 | | | 355 | | | 355 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 51 | | | 51 | | | 66 | | | 46 | | | 46 | | | 59 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R8 Small Grain Silage Liquid Manure Spring | | | R8 Small Grain Silage Liquid Manure Fall | | | R8 Small Grain Silage Liquid Manure Winter | | | R8 Small Grain Silage Solid Manure Spring | | | R8 Small Grain Silage Solid Manure Fall | | | R8 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | |
| Fields | R8 | | | R8 | | | R8 | | | R8 | | | R8 | | | R8 | | |
| Acres | 9.0 | | | 9.0 | | | 9.0 | | | 9.0 | | | 9.0 | | | 9.0 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 208 | | | 208 | | | 208 | | | 208 | | | 208 | | | 208 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 39 | | | 39 | | | 54 | | | 35 | | | 35 | | | 47 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R9 Small Grain Silage Liquid Manure Spring | | | R9 Small Grain Silage Liquid Manure Fall | | | R9 Small Grain Silage Liquid Manure Winter | | | R9 Small Grain Silage Solid Manure Spring | | | R9 Small Grain Silage Solid Manure Fall | | | R9 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | |
| Fields | R9 | | | R9 | | | R9 | | | R9 | | | R9 | | | R9 | | |
| Acres | 2.1 | | | 2.1 | | | 2.1 | | | 2.1 | | | 2.1 | | | 2.1 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 269 | | | 269 | | | 269 | | | 269 | | | 269 | | | 269 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 44 | | | 44 | | | 59 | | | 40 | | | 40 | | | 52 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R10 Small Grain Silage Liquid Manure Spring | | | R10 Small Grain Silage Liquid Manure Fall | | | R10 Small Grain Silage Liquid Manure Winter | | | R10 Small Grain Silage Solid Manure Spring | | | R10 Small Grain Silage Solid Manure Fall | | | R10 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | | | | | | | | | | | | | | | |
| Fields | R10 | | | R10 | | | R10 | | | R10 | | | R10 | | | R10 | | |
| Acres | 6.2 | | | 6.2 | | | 6.2 | | | 6.2 | | | 6.2 | | | 6.2 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 326 | | | 326 | | | 326 | | | 326 | | | 326 | | | 326 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 50 | | | 50 | | | 65 | | | 45 | | | 45 | | | 58 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R11 Small Grain Silage Liquid Manure Spring | | | R11 Small Grain Silage Liquid Manure Fall | | | R11 Small Grain Silage Liquid Manure Winter | | | R11 Small Grain Silage Solid Manure Spring | | | R11 Small Grain Silage Solid Manure Fall | | | R11 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | |
| Fields | R11 | | | R11 | | | R11 | | | R11 | | | R11 | | | R11 | | |
| Acres | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 268 | | | 268 | | | 268 | | | 268 | | | 268 | | | 268 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 45 | | | 45 | | | 61 | | | 41 | | | 41 | | | 53 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R12 Small Grain Silage Liquid Manure Spring | | | R12 Small Grain Silage Liquid Manure Fall | | | R12 Small Grain Silage Liquid Manure Winter | | | R12 Small Grain Silage Solid Manure Spring | | | R12 Small Grain Silage Solid Manure Fall | | | R12 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | |
| Fields | R12 | | | R12 | | | R12 | | | R12 | | | R12 | | | R12 | | |
| Acres | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 270 | | | 270 | | | 270 | | | 270 | | | 270 | | | 270 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 45 | | | 45 | | | 61 | | | 41 | | | 41 | | | 53 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R13 Small Grain Silage Liquid Manure Spring | | | R13 Small Grain Silage Liquid Manure Fall | | | R13 Small Grain Silage Liquid Manure Winter | | | R13 Small Grain Silage Solid Manure Spring | | | R13 Small Grain Silage Solid Manure Fall | | | R13 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | |
| Fields | R13 | | | R13 | | | R13 | | | R13 | | | R13 | | | R13 | | |
| Acres | 6.3 | | | 6.3 | | | 6.3 | | | 6.3 | | | 6.3 | | | 6.3 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 312 | | | 312 | | | 312 | | | 312 | | | 312 | | | 312 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 48 | | | 48 | | | 64 | | | 44 | | | 44 | | | 57 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R14 Small Grain Silage Liquid Manure Spring | | | R14 Small Grain Silage Liquid Manure Fall | | | R14 Small Grain Silage Liquid Manure Winter | | | R14 Small Grain Silage Solid Manure Spring | | | R14 Small Grain Silage Solid Manure Fall | | | R14 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | |
| Fields | R14 | | | R14 | | | R14 | | | R14 | | | R14 | | | R14 | | |
| Acres | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 53 | | | 53 | | | 71 | | | 48 | | | 48 | | | 63 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R15 Small Grain Silage Liquid Manure Spring | | | R15 Small Grain Silage Liquid Manure Fall | | | R15 Small Grain Silage Liquid Manure Winter | | | R15 Small Grain Silage Solid Manure Spring | | | R15 Small Grain Silage Solid Manure Fall | | | R15 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | |
| Fields | R15 | | | R15 | | | R15 | | | R15 | | | R15 | | | R15 | | |
| Acres | 3.6 | | | 3.6 | | | 3.6 | | | 3.6 | | | 3.6 | | | 3.6 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 53 | | | 53 | | | 71 | | | 48 | | | 48 | | | 63 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R16 Small Grain Silage Liquid Manure Spring | | | R16 Small Grain Silage Liquid Manure Fall | | | R16 Small Grain Silage Liquid Manure Winter | | | R16 Small Grain Silage Solid Manure Spring | | | R16 Small Grain Silage Solid Manure Fall | | | R16 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | |
| Fields | R16 | | | R16 | | | R16 | | | R16 | | | R16 | | | R16 | | |
| Acres | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 423 | | | 423 | | | 423 | | | 423 | | | 423 | | | 423 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Nov - Mar: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 66 | | | 66 | | | 75 | | | 61 | | | 61 | | | 76 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R17 Small Grain Silage Liquid Manure Spring | | | R17 Small Grain Silage Liquid Manure Fall | | | R17 Small Grain Silage Liquid Manure Winter | | | R17 Small Grain Silage Solid Manure Spring | | | R17 Small Grain Silage Solid Manure Fall | | | R17 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | |
| Fields | R17 | | | R17 | | | R17 | | | R17 | | | R17 | | | R17 | | |
| Acres | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 256 | | | 256 | | | 256 | | | 256 | | | 256 | | | 256 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 51 | | | 51 | | | 69 | | | 46 | | | 46 | | | 60 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

Phosphorus Index

[Go to NBS Input](#)

[Go to NBS Index](#)

Pennsylvania P Index Version 2

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | CMU/Field ID | R1_2 Small Grain Silage Liquid Manure Spring |
|--|--|--|---|---|---|---|--|
| Is the CMU in a Special Protection watershed? A significant farm management change as defined by Act 38? Soil Test Mehlich 3 P greater than 200 ppm P? Contributing Distance from CMU to receiving water <150 ft.? Is winter manure application planned for this field ? | | Is the CMU in a Special Protection watershed? Is there a significant farm management change as defined by Act 38? Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) Is the Contributing Distance from this CMU to receiving water less than 150 ft.? Is winter manure application planned for this field ? | | | | If the answer is Yes to <u>any</u> of these questions, Part B must be used. | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | 223 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | | 45 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | - | |
| SUPPLEMENTAL P FERTILIZER | | | | | Fertilizer P (lb P2O5/acre) | 0 | |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ² | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | - | |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | 0 | |
| MANURE P RATE | | | | | Manure P (lb P2O5/acre) | 122 | |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | 0.6 | |
| P SOURCE COEFFICIENT ³ | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | 0.8 | |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | 59 | |
| Source Factor Sum | | | | | | 104 | |
| PART B: TRANSPORT FACTORS EROSION | | Soil Loss (ton/acre/yr) | | | | 0.68 | |
| RUNOFF POTENTIAL | 0 <i>Drainage Class is Excessively</i> | 2 <i>Drainage Class is Somewhat Excessively</i> | 4 <i>Drainage Class is Well/Moderately Well</i> | 6 <i>Drainage Class is Somewhat Poorly</i> | 8 <i>Drainage Class is Poorly/Very Poorly</i> | 4 | |
| SUBSURFACE DRAINAGE | 0 None | | 1 Random | | 2 ¹ Patterned | 0 | |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | 0 | |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | 5 | |
| MODIFIED CONNECTIVITY | 0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | 1.0 | |
| Transport Sum x Modified Connectivity / 24 | | | | | | 0.20 | |
| P Index Value = 2 x Source x Transport | | | | | | 40 | |

Low: 59 or less
Nitrogen based management

Medium: 60 to 79
Nitrogen based management

High: 80 to 99
Phosphorus limited to crop removal

Very High: 100 or greater
No Phosphorus applied

1 OR rapidly permeable soil near a stream

2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R1_2 Small Grain Silage Liquid Manure Fall | R1_2 Small Grain Silage Liquid Manure Winter | R1_2 Small Grain Silage Solid Manure Spring | R1_2 Small Grain Silage Solid Manure Fall | R1_2 Small Grain Silage Solid Manure Winter | R3 Small Grain Silage Liquid Manure Winter | R3 Small Grain Silage Solid Manure Winter |
|--|--|--|---|---|---|--|---|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 223 | 223 | 223 | 223 | 223 | 157 | 157 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | Yes | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 223 | 223 | 223 | 223 | 223 | 157 | 157 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 45 | 45 | 45 | 45 | 45 | 31 | 31 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 100 | 100 | 100 | 122 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 1 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 98 | 48 | 48 | 80 | 98 | 80 |
| Source Factor Sum | 104 | 143 | 93 | 93 | 125 | 129 | 111 |
| PART B: TRANSPORT FACTORS EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 40 | 56 | 36 | 36 | 49 | 50 | 43 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R4 Small Grain Silage Liquid Manure Spring | R4 Small Grain Silage Liquid Manure Fall | R4 Small Grain Silage Liquid Manure Winter | R4 Small Grain Silage Solid Manure Spring | R4 Small Grain Silage Solid Manure Fall | R4 Small Grain Silage Solid Manure Winter | R5B Small Grain Silage Liquid Manure Spring |
|--|--|--|--|---|---|---|---|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 335 | 335 | 335 | 335 | 335 | 335 | 329 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 335 | 335 | 335 | 335 | 335 | 335 | 329 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 67 | 67 | 67 | 67 | 67 | 67 | 66 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 122 | 100 | 100 | 100 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 59 | 98 | 48 | 48 | 80 | 59 |
| Source Factor Sum | 126 | 126 | 165 | 115 | 115 | 147 | 125 |
| PART B: TRANSPORT FACTORS EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 49 | 49 | 64 | 45 | 45 | 57 | 49 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R5B Small Grain Silage Liquid Manure Fall | R5B Small Grain Silage Liquid Manure Winter | R5B Small Grain Silage Solid Manure Spring | R5B Small Grain Silage Solid Manure Fall | R5B Small Grain Silage Solid Manure Winter | R6 Small Grain Silage Liquid Manure Spring | R6 Small Grain Silage Liquid Manure Fall |
|--|---|---|--|--|--|--|--|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 329 | 329 | 329 | 329 | 329 | 370 | 370 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 329 | 329 | 329 | 329 | 329 | 370 | 370 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 66 | 66 | 66 | 66 | 66 | 74 | 74 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 100 | 100 | 100 | 122 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 98 | 48 | 48 | 80 | 59 | 59 |
| Source Factor Sum | 125 | 164 | 114 | 114 | 146 | 133 | 133 |
| PART B: TRANSPORT FACTORS EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 49 | 64 | 44 | 44 | 57 | 52 | 52 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R6 Small Grain Silage Liquid Manure Winter | R6 Small Grain Silage Solid Manure Spring | R6 Small Grain Silage Solid Manure Fall | R6 Small Grain Silage Solid Manure Winter | R7 Small Grain Silage Liquid Manure Spring | R7 Small Grain Silage Liquid Manure Fall | R7 Small Grain Silage Liquid Manure Winter |
|--|--|---|---|---|--|--|--|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 370 | 370 | 370 | 370 | 355 | 355 | 355 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 370 | 370 | 370 | 370 | 355 | 355 | 355 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 74 | 74 | 74 | 74 | 71 | 71 | 71 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 100 | 100 | 100 | 122 | 122 | 122 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 98 | 48 | 48 | 80 | 59 | 59 | 98 |
| Source Factor Sum | 172 | 122 | 122 | 154 | 130 | 130 | 169 |
| PART B: TRANSPORT FACTORS EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 67 | 48 | 48 | 60 | 51 | 51 | 66 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R7 Small Grain Silage Solid Manure Spring | R7 Small Grain Silage Solid Manure Fall | R7 Small Grain Silage Solid Manure Winter | R8 Small Grain Silage Liquid Manure Spring | R8 Small Grain Silage Liquid Manure Fall | R8 Small Grain Silage Liquid Manure Winter | R8 Small Grain Silage Solid Manure Spring |
|--|---|---|---|--|--|--|---|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 355 | 355 | 355 | 208 | 208 | 208 | 208 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 355 | 355 | 355 | 208 | 208 | 208 | 208 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 71 | 71 | 71 | 42 | 42 | 42 | 42 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 100 | 122 | 122 | 122 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 48 | 48 | 80 | 59 | 59 | 98 | 48 |
| Source Factor Sum | 119 | 119 | 151 | 101 | 101 | 140 | 90 |
| PART B: TRANSPORT FACTORS EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 46 | 46 | 59 | 39 | 39 | 54 | 35 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R8 Small Grain Silage Solid Manure Fall | R8 Small Grain Silage Solid Manure Winter | R9 Small Grain Silage Liquid Manure Spring | R9 Small Grain Silage Liquid Manure Fall | R9 Small Grain Silage Liquid Manure Winter | R9 Small Grain Silage Solid Manure Spring | R9 Small Grain Silage Solid Manure Fall |
|--|---|---|--|--|--|---|---|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 208 | 208 | 269 | 269 | 269 | 269 | 269 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 208 | 208 | 269 | 269 | 269 | 269 | 269 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 42 | 42 | 54 | 54 | 54 | 54 | 54 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 122 | 122 | 122 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 48 | 80 | 59 | 59 | 98 | 48 | 48 |
| Source Factor Sum | 90 | 122 | 113 | 113 | 152 | 102 | 102 |
| PART B: TRANSPORT FACTORS EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 35 | 47 | 44 | 44 | 59 | 40 | 40 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R9 Small Grain Silage Solid Manure Winter | R10 Small Grain Silage Liquid Manure Spring | R10 Small Grain Silage Liquid Manure Fall | R10 Small Grain Silage Liquid Manure Winter | R10 Small Grain Silage Solid Manure Spring | R10 Small Grain Silage Solid Manure Fall | R10 Small Grain Silage Solid Manure Winter |
|--|---|---|---|---|--|--|--|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 269 | 326 | 326 | 326 | 326 | 326 | 326 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 269 | 326 | 326 | 326 | 326 | 326 | 326 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 54 | 65 | 65 | 65 | 65 | 65 | 65 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 122 | 122 | 122 | 100 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 80 | 59 | 59 | 98 | 48 | 48 | 80 |
| Source Factor Sum | 134 | 124 | 124 | 163 | 113 | 113 | 145 |
| PART B: TRANSPORT FACTORS EROSION | 0.68 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 52 | 50 | 50 | 65 | 45 | 45 | 58 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R11 Small Grain Silage Liquid Manure Spring | R11 Small Grain Silage Liquid Manure Fall | R11 Small Grain Silage Liquid Manure Winter | R11 Small Grain Silage Solid Manure Spring | R11 Small Grain Silage Solid Manure Fall | R11 Small Grain Silage Solid Manure Winter | R12 Small Grain Silage Liquid Manure Spring |
|---|--|--|--|---|---|---|--|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 268 | 268 | 268 | 268 | 268 | 268 | 270 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 268 | 268 | 268 | 268 | 268 | 268 | 270 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 122 | 100 | 100 | 100 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 59 | 98 | 48 | 48 | 80 | 59 |
| Source Factor Sum | 113 | 113 | 152 | 102 | 102 | 134 | 113 |
| PART B: TRANSPORT FACTORS EROSION | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 45 | 45 | 61 | 41 | 41 | 53 | 45 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R12 Small Grain Silage Liquid Manure Fall | R12 Small Grain Silage Liquid Manure Winter | R12 Small Grain Silage Solid Manure Spring | R12 Small Grain Silage Solid Manure Fall | R12 Small Grain Silage Solid Manure Winter | R13 Small Grain Silage Liquid Manure Spring | R13 Small Grain Silage Liquid Manure Fall |
|--|---|---|--|--|--|---|---|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 270 | 270 | 270 | 270 | 270 | 312 | 312 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 270 | 270 | 270 | 270 | 270 | 312 | 312 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 54 | 54 | 54 | 54 | 54 | 62 | 62 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 100 | 100 | 100 | 122 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 98 | 48 | 48 | 80 | 59 | 59 |
| Source Factor Sum | 113 | 152 | 102 | 102 | 134 | 121 | 121 |
| PART B: TRANSPORT FACTORS EROSION | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 45 | 61 | 41 | 41 | 53 | 48 | 48 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R13 Small Grain Silage Liquid Manure Winter | R13 Small Grain Silage Solid Manure Spring | R13 Small Grain Silage Solid Manure Fall | R13 Small Grain Silage Solid Manure Winter | R14 Small Grain Silage Liquid Manure Spring | R14 Small Grain Silage Liquid Manure Fall | R14 Small Grain Silage Liquid Manure Winter |
|---|--|---|---|---|--|--|--|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 312 | 312 | 312 | 312 | 283 | 283 | 283 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 312 | 312 | 312 | 312 | 283 | 283 | 283 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 62 | 62 | 62 | 62 | 57 | 57 | 57 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 100 | 100 | 100 | 122 | 122 | 122 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 98 | 48 | 48 | 80 | 59 | 59 | 98 |
| Source Factor Sum | 160 | 110 | 110 | 142 | 116 | 116 | 155 |
| PART B: TRANSPORT FACTORS EROSION | 0.791 | 0.791 | 0.791 | 0.791 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 64 | 44 | 44 | 57 | 53 | 53 | 71 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R14 Small Grain Silage Solid Manure Spring | R14 Small Grain Silage Solid Manure Fall | R14 Small Grain Silage Solid Manure Winter | R15 Small Grain Silage Liquid Manure Spring | R15 Small Grain Silage Liquid Manure Fall | R15 Small Grain Silage Liquid Manure Winter | R15 Small Grain Silage Solid Manure Spring |
|--|--|--|--|---|---|---|--|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 283 | 283 | 283 | 283 | 283 | 283 | 283 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 283 | 283 | 283 | 283 | 283 | 283 | 283 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 57 | 57 | 57 | 57 | 57 | 57 | 57 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 100 | 122 | 122 | 122 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 48 | 48 | 80 | 59 | 59 | 98 | 48 |
| Source Factor Sum | 105 | 105 | 137 | 116 | 116 | 155 | 105 |
| PART B: TRANSPORT FACTORS EROSION | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 48 | 48 | 63 | 53 | 53 | 71 | 48 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R15 Small Grain Silage Solid Manure Fall | R15 Small Grain Silage Solid Manure Winter | R16 Small Grain Silage Liquid Manure Spring | R16 Small Grain Silage Liquid Manure Fall | R16 Small Grain Silage Liquid Manure Winter | R16 Small Grain Silage Solid Manure Spring | R16 Small Grain Silage Solid Manure Fall |
|---|---|---|--|--|--|---|---|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 283 | 283 | 423 | 423 | 423 | 423 | 423 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 283 | 283 | 423 | 423 | 423 | 423 | 423 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 57 | 57 | 85 | 85 | 85 | 85 | 85 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 122 | 122 | 122 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 0.8 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 48 | 80 | 59 | 59 | 78 | 48 | 48 |
| Source Factor Sum | 105 | 137 | 144 | 144 | 163 | 133 | 133 |
| PART B: TRANSPORT FACTORS EROSION | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 48 | 63 | 66 | 66 | 75 | 61 | 61 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R16 Small Grain Silage Solid Manure Winter | R17 Small Grain Silage Liquid Manure Spring | R17 Small Grain Silage Liquid Manure Fall | R17 Small Grain Silage Liquid Manure Winter | R17 Small Grain Silage Solid Manure Spring | R17 Small Grain Silage Solid Manure Fall | R17 Small Grain Silage Solid Manure Winter |
|---|---|--|--|--|---|---|---|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 423 | 256 | 256 | 256 | 256 | 256 | 256 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 423 | 256 | 256 | 256 | 256 | 256 | 256 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 85 | 51 | 51 | 51 | 51 | 51 | 51 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 122 | 122 | 122 | 100 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 80 | 59 | 59 | 98 | 48 | 48 | 80 |
| Source Factor Sum | 165 | 110 | 110 | 149 | 99 | 99 | 131 |
| PART B: TRANSPORT FACTORS EROSION | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 76 | 51 | 51 | 69 | 46 | 46 | 60 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Nutrient Balance Sheet Summary

Importing Farm: Gary Truckenmiller

Whole Farm Note: None

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|---|--------|-------|--------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R18 Small Grain Silage Liquid Manure Spring | R18 | 5 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R18 Small Grain Silage Liquid Manure Fall | R18 | 5 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R18 Small Grain Silage Liquid Manure Winter | R18 | 5 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R18 Small Grain Silage Solid Manure Spring | R18 | 5 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R18 Small Grain Silage Solid Manure Fall | R18 | 5 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R18 Small Grain Silage Solid Manure Winter | R18 | 5 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |
| R19 Small Grain Silage Liquid Manure Spring | R19 | 1.6 | Small Grain Silage | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |
| R19 Small Grain Silage Liquid Manure Fall | R19 | 1.6 | Small Grain Silage | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 78 | 0 | 0 | 0 | -66 | -94 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|---|--------|-------|--------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R19 Small Grain Silage Liquid Manure Winter | R19 | 1.6 | Small Grain Silage | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 8000 gal/A | 0 | 0 | 0 | 30 | 0 | 0 | 0 | -66 | -94 |
| R19 Small Grain Silage Solid Manure Spring | R19 | 1.6 | Small Grain Silage | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R19 Small Grain Silage Solid Manure Fall | R19 | 1.6 | Small Grain Silage | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 104 | 0 | 40 | 0 | -44 | 0 |
| R19 Small Grain Silage Solid Manure Winter | R19 | 1.6 | Small Grain Silage | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 82 | 0 | 40 | 0 | -44 | 0 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NBS Summary Notes

Importing Farm: Gary Truckenmiller

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---|--------------------|----------------------|--------------------------------------|--|--|
| R18 Small Grain Silage Liquid Manure Spring | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R18 Small Grain Silage Liquid Manure Fall | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R18 Small Grain Silage Liquid Manure Winter | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R18 Small Grain Silage Solid Manure Spring | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R18 Small Grain Silage Solid Manure Fall | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R18 Small Grain Silage Solid Manure Winter | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R19 Small Grain Silage Liquid Manure Spring | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R19 Small Grain Silage Liquid Manure Fall | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R19 Small Grain Silage Liquid Manure Winter | Small Grain Silage | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R19 Small Grain Silage Solid Manure Spring | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--|--------------------|---------------------|---|---|--|
| R19 Small Grain Silage Solid Manure Fall | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R19 Small Grain Silage Solid Manure Winter | Small Grain Silage | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| Nutrient Balance Sheets | R18 Small Grain Silage Liquid Manure Spring | | | R18 Small Grain Silage Liquid Manure Fall | | | R18 Small Grain Silage Liquid Manure Winter | | | R18 Small Grain Silage Solid Manure Spring | | | R18 Small Grain Silage Solid Manure Fall | | | R18 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | |
| Fields | R18 | | | R18 | | | R18 | | | R18 | | | R18 | | | R18 | | |
| Acres | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 166 | | | 166 | | | 166 | | | 166 | | | 166 | | | 166 | | |
| P Index Part A Evaluation | | | | | | | Winter | | | | | | | | | Winter | | |
| Part A Result | N Based | | | N Based | | | Part B | | | N Based | | | N Based | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | | | | | | | Surface app. when frozen/snow covered | | | | | | | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | | | | | | | 72 | | | | | | | | | 62 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R19 Small Grain Silage Liquid Manure Spring | | | R19 Small Grain Silage Liquid Manure Fall | | | R19 Small Grain Silage Liquid Manure Winter | | | R19 Small Grain Silage Solid Manure Spring | | | R19 Small Grain Silage Solid Manure Fall | | | R19 Small Grain Silage Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | | Crop Group Identification | | |
| Fields | R19 | | | R19 | | | R19 | | | R19 | | | R19 | | | R19 | | |
| Acres | 1.6 | | | 1.6 | | | 1.6 | | | 1.6 | | | 1.6 | | | 1.6 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 293 | | | 293 | | | 293 | | | 293 | | | 293 | | | 293 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | | Small Grain Silage | | |
| Planned Yield | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | | 8 ton/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 | 136 | 56 | 208 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 | 125 | 56 | 208 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 10,531 gal/A | | | 59 tons/A | | | 59 tons/A | | | 29 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,684 gal/A | | | 3,684 gal/A | | | 3,684 gal/A | | | 6 tons/A | | | 6 tons/A | | | 6 tons/A | | |
| | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | |
| P Index Value | 54 | | | 54 | | | 72 | | | 49 | | | 49 | | | 64 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 95 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 78 | -66 | -94 | 78 | -66 | -94 | 30 | -66 | -94 | 104 | -44 | 40 | 104 | -44 | 40 | 82 | -44 | 40 |
| Supplemental Fertilizer (lb/A) | 78 | 0 | 0 | 78 | 0 | 0 | 30 | 0 | 0 | 104 | 0 | 40 | 104 | 0 | 40 | 82 | 0 | 40 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -66 | -94 | 0 | -44 | 0 | 0 | -44 | 0 | 0 | -44 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

Phosphorus Index

[Go to NBS Input](#)

[Go to NBS Index](#)

Pennsylvania P Index Version 2

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | CMU/Field ID | R18 Small Grain Silage Liquid Manure Winter |
|--|--|--|---|---|---|---|--|
| Is the CMU in a Special Protection watershed? A significant farm management change as defined by Act 38? Soil Test Mehlich 3 P greater than 200 ppm P? Contributing Distance from CMU to receiving water <150 ft.? Is winter manure application planned for this field ? | | Is the CMU in a Special Protection watershed? Is there a significant farm management change as defined by Act 38? Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) Is the Contributing Distance from this CMU to receiving water less than 150 ft.? Is winter manure application planned for this field ? | | | | If the answer is Yes to <u>any</u> of these questions, Part B must be used. | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | 166 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | | 33 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | - | |
| SUPPLEMENTAL P FERTILIZER | | | | | Fertilizer P (lb P2O5/acre) | 0 | |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | - | |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | 0 | |
| MANURE P RATE | | | | | Manure P (lb P2O5/acre) | 122 | |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | 1 | |
| P SOURCE COEFFICIENT ³ | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | 0.8 | |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | 98 | |
| Source Factor Sum | | | | | | 131 | |
| PART B: TRANSPORT FACTORS EROSION | | Soil Loss (ton/acre/yr) | | | | 0.55 | |
| RUNOFF POTENTIAL | 0 <i>Drainage Class is Excessively</i> | 2 <i>Drainage Class is Somewhat Excessively</i> | 4 <i>Drainage Class is Well/Moderately Well</i> | 6 <i>Drainage Class is Somewhat Poorly</i> | 8 <i>Drainage Class is Poorly/Very Poorly</i> | 4 | |
| SUBSURFACE DRAINAGE | 0 None | | 1 Random | | 2 ¹ Patterned | 0 | |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | 2 | |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | 7 | |
| MODIFIED CONNECTIVITY | 0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | 1.0 | |
| Transport Sum x Modified Connectivity / 24 | | | | | | 0.27 | |
| P Index Value = 2 x Source x Transport | | | | | | 72 | |

Low: 59 or less
Nitrogen based management

Medium: 60 to 79
Nitrogen based management

High: 80 to 99
Phosphorus limited to crop removal

Very High: 100 or greater
No Phosphorus applied

1 OR rapidly permeable soil near a stream

2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R18 Small Grain Silage Solid Manure Winter | R19 Small Grain Silage Liquid Manure Spring | R19 Small Grain Silage Liquid Manure Fall | R19 Small Grain Silage Liquid Manure Winter | R19 Small Grain Silage Solid Manure Spring | R19 Small Grain Silage Solid Manure Fall | R19 Small Grain Silage Solid Manure Winter |
|---|---|--|--|--|---|---|---|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 166 | 293 | 293 | 293 | 293 | 293 | 293 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 166 | 293 | 293 | 293 | 293 | 293 | 293 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 33 | 59 | 59 | 59 | 59 | 59 | 59 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 122 | 122 | 122 | 100 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Metho | 80 | 59 | 59 | 98 | 48 | 48 | 80 |
| Source Factor Sum | 113 | 118 | 118 | 157 | 107 | 107 | 139 |
| PART B: TRANSPORT FACTORS EROSION | 0.55 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 7 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.27 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 62 | 54 | 54 | 72 | 49 | 49 | 64 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Nutrient Balance Sheet Summary

Importing Farm: Gary Truckenmiller

Whole Farm Note: None

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|------------------------------------|--------|-------|----------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R1_2 Soybeans Liquid Manure Spring | R1_2 | 14.9 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R1_2 Soybeans Liquid Manure Fall | R1_2 | 14.9 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R1_2 Soybeans Liquid Manure Winter | R1_2 | 14.9 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R1_2 Soybeans Solid Manure Spring | R1_2 | 14.9 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R1_2 Soybeans Solid Manure Fall | R1_2 | 14.9 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R1_2 Soybeans Solid Manure Winter | R1_2 | 14.9 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R3 Soybeans Liquid Manure Spring | R3 | 4.3 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R3 Soybeans Liquid Manure Fall | R3 | 4.3 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|----------------------------------|--------|-------|----------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R3 Soybeans Liquid Manure Winter | R3 | 4.3 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R3 Soybeans Solid Manure Spring | R3 | 4.3 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R3 Soybeans Solid Manure Fall | R3 | 4.3 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R3 Soybeans Solid Manure Winter | R3 | 4.3 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R4 Soybeans Liquid Manure Spring | R4 | 3.9 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R4 Soybeans Liquid Manure Fall | R4 | 3.9 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R4 Soybeans Liquid Manure Winter | R4 | 3.9 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R4 Soybeans Solid Manure Spring | R4 | 3.9 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R4 Soybeans Solid Manure Fall | R4 | 3.9 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R4 Soybeans Solid Manure Winter | R4 | 3.9 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|-----------------------------------|--------|-------|----------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R5B Soybeans Liquid Manure Spring | R5B | 4.1 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R5B Soybeans Liquid Manure Fall | R5B | 4.1 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R5B Soybeans Liquid Manure Winter | R5B | 4.1 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R5B Soybeans Solid Manure Spring | R5B | 4.1 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R5B Soybeans Solid Manure Fall | R5B | 4.1 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R5B Soybeans Solid Manure Winter | R5B | 4.1 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R6 Soybeans Liquid Manure Spring | R6 | 5.1 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R6 Soybeans Liquid Manure Fall | R6 | 5.1 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R6 Soybeans Liquid Manure Winter | R6 | 5.1 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R6 Soybeans Solid Manure Spring | R6 | 5.1 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R6 Soybeans Solid Manure Fall | R6 | 5.1 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|----------------------------------|--------|-------|----------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R6 Soybeans Solid Manure Winter | R6 | 5.1 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R7 Soybeans Liquid Manure Spring | R7 | 3.1 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R7 Soybeans Liquid Manure Fall | R7 | 3.1 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R7 Soybeans Liquid Manure Winter | R7 | 3.1 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R7 Soybeans Solid Manure Spring | R7 | 3.1 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R7 Soybeans Solid Manure Fall | R7 | 3.1 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R7 Soybeans Solid Manure Winter | R7 | 3.1 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R8 Soybeans Liquid Manure Spring | R8 | 9 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R8 Soybeans Liquid Manure Fall | R8 | 9 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R8 Soybeans Liquid Manure Winter | R8 | 9 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|-----------------------------------|--------|-------|----------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R8 Soybeans Solid Manure Spring | R8 | 9 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R8 Soybeans Solid Manure Fall | R8 | 9 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R8 Soybeans Solid Manure Winter | R8 | 9 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R9 Soybeans Liquid Manure Spring | R9 | 2.1 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R9 Soybeans Liquid Manure Fall | R9 | 2.1 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R9 Soybeans Liquid Manure Winter | R9 | 2.1 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R9 Soybeans Solid Manure Spring | R9 | 2.1 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R9 Soybeans Solid Manure Fall | R9 | 2.1 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R9 Soybeans Solid Manure Winter | R9 | 2.1 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R10 Soybeans Liquid Manure Spring | R10 | 6.2 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R10 Soybeans Liquid Manure Fall | R10 | 6.2 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|-----------------------------------|--------|-------|----------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R10 Soybeans Liquid Manure Winter | R10 | 6.2 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R10 Soybeans Solid Manure Spring | R10 | 6.2 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R10 Soybeans Solid Manure Fall | R10 | 6.2 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R10 Soybeans Solid Manure Winter | R10 | 6.2 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R11 Soybeans Liquid Manure Spring | R11 | 2.2 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R11 Soybeans Liquid Manure Fall | R11 | 2.2 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R11 Soybeans Liquid Manure Winter | R11 | 2.2 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R11 Soybeans Solid Manure Spring | R11 | 2.2 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R11 Soybeans Solid Manure Fall | R11 | 2.2 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R11 Soybeans Solid Manure Winter | R11 | 2.2 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|-----------------------------------|--------|-------|----------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R12 Soybeans Liquid Manure Spring | R12 | 3.3 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R12 Soybeans Liquid Manure Fall | R12 | 3.3 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R12 Soybeans Liquid Manure Winter | R12 | 3.3 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R12 Soybeans Solid Manure Spring | R12 | 3.3 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R12 Soybeans Solid Manure Fall | R12 | 3.3 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R12 Soybeans Solid Manure Winter | R12 | 3.3 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R13 Soybeans Liquid Manure Spring | R13 | 6.3 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R13 Soybeans Liquid Manure Fall | R13 | 6.3 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R13 Soybeans Liquid Manure Winter | R13 | 6.3 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R13 Soybeans Solid Manure Spring | R13 | 6.3 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R13 Soybeans Solid Manure Fall | R13 | 6.3 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|-----------------------------------|--------|-------|----------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R13 Soybeans Solid Manure Winter | R13 | 6.3 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R14 Soybeans Liquid Manure Spring | R14 | 4 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R14 Soybeans Liquid Manure Fall | R14 | 4 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R14 Soybeans Liquid Manure Winter | R14 | 4 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R14 Soybeans Solid Manure Spring | R14 | 4 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R14 Soybeans Solid Manure Fall | R14 | 4 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R14 Soybeans Solid Manure Winter | R14 | 4 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R15 Soybeans Liquid Manure Spring | R15 | 3.6 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R15 Soybeans Liquid Manure Fall | R15 | 3.6 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R15 Soybeans Liquid Manure Winter | R15 | 3.6 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|-----------------------------------|--------|-------|----------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R15 Soybeans Solid Manure Spring | R15 | 3.6 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R15 Soybeans Solid Manure Fall | R15 | 3.6 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R15 Soybeans Solid Manure Winter | R15 | 3.6 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R16 Soybeans Liquid Manure Spring | R16 | 3.3 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R16 Soybeans Liquid Manure Fall | R16 | 3.3 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R16 Soybeans Liquid Manure Winter | R16 | 3.3 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R16 Soybeans Solid Manure Spring | R16 | 3.3 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R16 Soybeans Solid Manure Fall | R16 | 3.3 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R16 Soybeans Solid Manure Winter | R16 | 3.3 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R17 Soybeans Liquid Manure Spring | R17 | 2.2 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R17 Soybeans Liquid Manure Fall | R17 | 2.2 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | | |
|---|--------|-------|-------------------------|-------------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | |
| R17 Soybeans Liquid Manure Winter | R17 | 2.2 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals- Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R17 Soybeans Solid Manure Spring | R17 | 2.2 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R17 Soybeans Solid Manure Fall | R17 | 2.2 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R17 Soybeans Solid Manure Winter | R17 | 2.2 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals- Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NBS Summary Notes

Importing Farm: Gary Truckenmiller

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--|----------------------|----------------------|--------------------------------------|--|--|
| R1_2 Soybeans Liquid Manure Spring | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R1_2 Soybeans Liquid Manure Fall | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R1_2 Soybeans Liquid Manure Winter | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R1_2 Soybeans Solid Manure Spring | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R1_2 Soybeans Solid Manure Fall | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R1_2 Soybeans Solid Manure Winter | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R3 Soybeans Liquid Manure Spring | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R3 Soybeans Liquid Manure Fall | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R3 Soybeans Liquid Manure Winter | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R3 Soybeans Solid Manure Spring | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--------------------------------------|----------------------|----------------------|--------------------------------------|--|--|
| R3 Soybeans Solid Manure Fall | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R3 Soybeans Solid Manure Winter | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R4 Soybeans Liquid Manure Spring | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R4 Soybeans Liquid Manure Fall | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R4 Soybeans Liquid Manure Winter | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R4 Soybeans Solid Manure Spring | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R4 Soybeans Solid Manure Fall | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R4 Soybeans Solid Manure Winter | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R5B Soybeans Liquid Manure Spring | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R5B Soybeans Liquid Manure Fall | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---|----------------------|----------------------|--------------------------------------|--|--|
| R5B Soybeans Liquid Manure Winter | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R5B Soybeans Solid Manure Spring | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R5B Soybeans Solid Manure Fall | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R5B Soybeans Solid Manure Winter | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R6 Soybeans Liquid Manure Spring | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R6 Soybeans Liquid Manure Fall | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R6 Soybeans Liquid Manure Winter | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R6 Soybeans Solid Manure Spring | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R6 Soybeans Solid Manure Fall | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R6 Soybeans Solid Manure Winter | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---|----------------------|----------------------|--------------------------------------|--|--|
| R8 Soybeans Solid Manure Winter | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R9 Soybeans Liquid Manure Spring | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R9 Soybeans Liquid Manure Fall | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R9 Soybeans Liquid Manure Winter | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R9 Soybeans Solid Manure Spring | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R9 Soybeans Solid Manure Fall | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R9 Soybeans Solid Manure Winter | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R10 Soybeans Liquid Manure Spring | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R10 Soybeans Liquid Manure Fall | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R10 Soybeans Liquid Manure Winter | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---|----------------------|----------------------|--------------------------------------|--|--|
| R12 Soybeans Liquid Manure Winter | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R12 Soybeans Solid Manure Spring | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R12 Soybeans Solid Manure Fall | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R12 Soybeans Solid Manure Winter | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R13 Soybeans Liquid Manure Spring | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R13 Soybeans Liquid Manure Fall | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R13 Soybeans Liquid Manure Winter | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R13 Soybeans Solid Manure Spring | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R13 Soybeans Solid Manure Fall | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R13 Soybeans Solid Manure Winter | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---|----------------------|----------------------|--------------------------------------|--|--|
| R14 Soybeans Liquid Manure Spring | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R14 Soybeans Liquid Manure Fall | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R14 Soybeans Liquid Manure Winter | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R14 Soybeans Solid Manure Spring | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R14 Soybeans Solid Manure Fall | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R14 Soybeans Solid Manure Winter | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R15 Soybeans Liquid Manure Spring | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R15 Soybeans Liquid Manure Fall | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R15 Soybeans Liquid Manure Winter | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R15 Soybeans Solid Manure Spring | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R15 Soybeans Solid Manure Fall | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---|----------------------|----------------------|--------------------------------------|--|--|
| R15 Soybeans Solid Manure Winter | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R16 Soybeans Liquid Manure Spring | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R16 Soybeans Liquid Manure Fall | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R16 Soybeans Liquid Manure Winter | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may not be applied to this field if it is snow or ice covered. |
| R16 Soybeans Solid Manure Spring | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R16 Soybeans Solid Manure Fall | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R16 Soybeans Solid Manure Winter | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R17 Soybeans Liquid Manure Spring | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R17 Soybeans Liquid Manure Fall | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R17 Soybeans Liquid Manure Winter | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--|----------------------|---------------------|--------------------------------------|--|--|
| R17 Soybeans Solid Manure Spring | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R17 Soybeans Solid Manure Fall | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R17 Soybeans Solid Manure Winter | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| Nutrient Balance Sheets | | R1_2 Soybeans Liquid Manure Spring | | | R1_2 Soybeans Liquid Manure Fall | | | R1_2 Soybeans Liquid Manure Winter | | | R1_2 Soybeans Solid Manure Spring | | | R1_2 Soybeans Solid Manure Fall | | | R1_2 Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R1_2 | | | R1_2 | | | R1_2 | | | R1_2 | | | R1_2 | | | R1_2 | | |
| Acres | | 14.9 | | | 14.9 | | | 14.9 | | | 14.9 | | | 14.9 | | | 14.9 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 223 | | | 223 | | | 223 | | | 223 | | | 223 | | | 223 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | 40 | | | 40 | | | 56 | | | 36 | | | 36 | | | 49 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R3 Soybeans Liquid Manure Spring | | | R3 Soybeans Liquid Manure Fall | | | R3 Soybeans Liquid Manure Winter | | | R3 Soybeans Solid Manure Spring | | | R3 Soybeans Solid Manure Fall | | | R3 Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R3 | | | R3 | | | R3 | | | R3 | | | R3 | | | R3 | | |
| Acres | | 4.3 | | | 4.3 | | | 4.3 | | | 4.3 | | | 4.3 | | | 4.3 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 157 | | | 157 | | | 157 | | | 157 | | | 157 | | | 157 | | |
| P Index Part A Evaluation | | | | | | | | Winter | | | | | | | | | Winter | | |
| Part A Result | | N Based | | | N Based | | | Part B | | | N Based | | | N Based | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | Select Method | | | Select Method | | | Surface app. when frozen/snow covered | | | Select Method | | | Select Method | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | | | | | | | 50 | | | | | | | | | 43 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R4 Soybeans Liquid Manure Spring | | | R4 Soybeans Liquid Manure Fall | | | R4 Soybeans Liquid Manure Winter | | | R4 Soybeans Solid Manure Spring | | | R4 Soybeans Solid Manure Fall | | | R4 Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R4 | | | R4 | | | R4 | | | R4 | | | R4 | | | R4 | | |
| Acres | | 3.9 | | | 3.9 | | | 3.9 | | | 3.9 | | | 3.9 | | | 3.9 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 335 | | | 335 | | | 335 | | | 335 | | | 335 | | | 335 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | 49 | | | 49 | | | 64 | | | 45 | | | 45 | | | 57 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R5B Soybeans Liquid Manure Spring | | | R5B Soybeans Liquid Manure Fall | | | R5B Soybeans Liquid Manure Winter | | | R5B Soybeans Solid Manure Spring | | | R5B Soybeans Solid Manure Fall | | | R5B Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R5B | | | R5B | | | R5B | | | R5B | | | R5B | | | R5B | | |
| Acres | | 4.1 | | | 4.1 | | | 4.1 | | | 4.1 | | | 4.1 | | | 4.1 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 329 | | | 329 | | | 329 | | | 329 | | | 329 | | | 329 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | 49 | | | 49 | | | 64 | | | 44 | | | 44 | | | 57 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R6 Soybeans Liquid Manure Spring | | | R6 Soybeans Liquid Manure Fall | | | R6 Soybeans Liquid Manure Winter | | | R6 Soybeans Solid Manure Spring | | | R6 Soybeans Solid Manure Fall | | | R6 Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R6 | | | R6 | | | R6 | | | R6 | | | R6 | | | R6 | | |
| Acres | | 5.1 | | | 5.1 | | | 5.1 | | | 5.1 | | | 5.1 | | | 5.1 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 370 | | | 370 | | | 370 | | | 370 | | | 370 | | | 370 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | 52 | | | 52 | | | 67 | | | 48 | | | 48 | | | 60 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R7 Soybeans Liquid Manure Spring | | | R7 Soybeans Liquid Manure Fall | | | R7 Soybeans Liquid Manure Winter | | | R7 Soybeans Solid Manure Spring | | | R7 Soybeans Solid Manure Fall | | | R7 Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R7 | | | R7 | | | R7 | | | R7 | | | R7 | | | R7 | | |
| Acres | | 3.1 | | | 3.1 | | | 3.1 | | | 3.1 | | | 3.1 | | | 3.1 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 355 | | | 355 | | | 355 | | | 355 | | | 355 | | | 355 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | 51 | | | 51 | | | 66 | | | 46 | | | 46 | | | 59 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R8 Soybeans Liquid Manure Spring | | | R8 Soybeans Liquid Manure Fall | | | R8 Soybeans Liquid Manure Winter | | | R8 Soybeans Solid Manure Spring | | | R8 Soybeans Solid Manure Fall | | | R8 Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R8 | | | R8 | | | R8 | | | R8 | | | R8 | | | R8 | | |
| Acres | | 9.0 | | | 9.0 | | | 9.0 | | | 9.0 | | | 9.0 | | | 9.0 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 208 | | | 208 | | | 208 | | | 208 | | | 208 | | | 208 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | 39 | | | 39 | | | 54 | | | 35 | | | 35 | | | 47 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R9 Soybeans Liquid Manure Spring | | | R9 Soybeans Liquid Manure Fall | | | R9 Soybeans Liquid Manure Winter | | | R9 Soybeans Solid Manure Spring | | | R9 Soybeans Solid Manure Fall | | | R9 Soybeans Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | |
| Fields | R9 | | | R9 | | | R9 | | | R9 | | | R9 | | | R9 | | |
| Acres | 2.1 | | | 2.1 | | | 2.1 | | | 2.1 | | | 2.1 | | | 2.1 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 269 | | | 269 | | | 269 | | | 269 | | | 269 | | | 269 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | 44 | | | 44 | | | 59 | | | 40 | | | 40 | | | 52 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R10 Soybeans Liquid Manure Spring | | | R10 Soybeans Liquid Manure Fall | | | R10 Soybeans Liquid Manure Winter | | | R10 Soybeans Solid Manure Spring | | | R10 Soybeans Solid Manure Fall | | | R10 Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R10 | | | R10 | | | R10 | | | R10 | | | R10 | | | R10 | | |
| Acres | | 6.2 | | | 6.2 | | | 6.2 | | | 6.2 | | | 6.2 | | | 6.2 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 326 | | | 326 | | | 326 | | | 326 | | | 326 | | | 326 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | 50 | | | 50 | | | 65 | | | 45 | | | 45 | | | 58 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R11 Soybeans Liquid Manure Spring | | | R11 Soybeans Liquid Manure Fall | | | R11 Soybeans Liquid Manure Winter | | | R11 Soybeans Solid Manure Spring | | | R11 Soybeans Solid Manure Fall | | | R11 Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R11 | | | R11 | | | R11 | | | R11 | | | R11 | | | R11 | | |
| Acres | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 268 | | | 268 | | | 268 | | | 268 | | | 268 | | | 268 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | 45 | | | 45 | | | 61 | | | 41 | | | 41 | | | 53 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R12 Soybeans Liquid Manure Spring | | | R12 Soybeans Liquid Manure Fall | | | R12 Soybeans Liquid Manure Winter | | | R12 Soybeans Solid Manure Spring | | | R12 Soybeans Solid Manure Fall | | | R12 Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R12 | | | R12 | | | R12 | | | R12 | | | R12 | | | R12 | | |
| Acres | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 270 | | | 270 | | | 270 | | | 270 | | | 270 | | | 270 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | 45 | | | 45 | | | 61 | | | 41 | | | 41 | | | 53 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R13 Soybeans Liquid Manure Spring | | | R13 Soybeans Liquid Manure Fall | | | R13 Soybeans Liquid Manure Winter | | | R13 Soybeans Solid Manure Spring | | | R13 Soybeans Solid Manure Fall | | | R13 Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R13 | | | R13 | | | R13 | | | R13 | | | R13 | | | R13 | | |
| Acres | | 6.3 | | | 6.3 | | | 6.3 | | | 6.3 | | | 6.3 | | | 6.3 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 312 | | | 312 | | | 312 | | | 312 | | | 312 | | | 312 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | 48 | | | 48 | | | 64 | | | 44 | | | 44 | | | 57 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R14 Soybeans Liquid Manure Spring | | | R14 Soybeans Liquid Manure Fall | | | R14 Soybeans Liquid Manure Winter | | | R14 Soybeans Solid Manure Spring | | | R14 Soybeans Solid Manure Fall | | | R14 Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R14 | | | R14 | | | R14 | | | R14 | | | R14 | | | R14 | | |
| Acres | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | 53 | | | 53 | | | 71 | | | 48 | | | 48 | | | 63 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R15 Soybeans Liquid Manure Spring | | | R15 Soybeans Liquid Manure Fall | | | R15 Soybeans Liquid Manure Winter | | | R15 Soybeans Solid Manure Spring | | | R15 Soybeans Solid Manure Fall | | | R15 Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R15 | | | R15 | | | R15 | | | R15 | | | R15 | | | R15 | | |
| Acres | | 3.6 | | | 3.6 | | | 3.6 | | | 3.6 | | | 3.6 | | | 3.6 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | 53 | | | 53 | | | 71 | | | 48 | | | 48 | | | 63 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R16 Soybeans Liquid Manure Spring | | | R16 Soybeans Liquid Manure Fall | | | R16 Soybeans Liquid Manure Winter | | | R16 Soybeans Solid Manure Spring | | | R16 Soybeans Solid Manure Fall | | | R16 Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R16 | | | R16 | | | R16 | | | R16 | | | R16 | | | R16 | | |
| Acres | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 423 | | | 423 | | | 423 | | | 423 | | | 423 | | | 423 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Nov - Mar: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | 66 | | | 66 | | | 75 | | | 61 | | | 61 | | | 76 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------------------------|--|--|--------|--|--|
| R17 Soybeans Liquid Manure Spring | | | R17 Soybeans Liquid Manure Fall | | | R17 Soybeans Liquid Manure Winter | | | R17 Soybeans Solid Manure Spring | | | R17 Soybeans Solid Manure Fall | | | R17 Soybeans Solid Manure Winter | | | | | | | | | | | |
| Crop Group Identification | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fields | | | R17 | | | R17 | | | R17 | | | R17 | | | R17 | | | | | | | | | | | |
| Acres | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | | | | | | | | | |
| NBS Option | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | | | | | | | | | |
| P Banking | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P | | | | | | | | | | | | | | | | | | | | | | | | | | |
| For Option 2 enter maximum Soil Test | | | | | | | | | | | | | | | | | | | | | | | | | | |
| For Option 3 enter soil test for PI | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ppm P | | | 256 | | | ppm P | | | 256 | | | ppm P | | | 256 | | | ppm P | | | 256 | | | | | |
| P Index Part A Evaluation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Soil Test P | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Part A Result | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Part B | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Crop | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Soybeans with Manure | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Planned Yield | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50 bu/A | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Crop Removal Recommendations (LB/A) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | | | P2O5 | | | K2O | | | N | | | P2O5 | | | K2O | | | N | | | P2O5 | | | K2O | | |
| 160 | | | 50 | | | 70 | | | 160 | | | 50 | | | 70 | | | 160 | | | 50 | | | 70 | | |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (Nutrients applied regardless of manure) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | | | |
| P Index Application Method | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | | | | | | |
| Manure History Description | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Residual Manure N (lb/A) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 35 | | | Continuously - Summer Crop | | | 35 | | | Continuously - Summer Crop | | | 35 | | | Continuously - Summer Crop | | | 35 | | | Continuously - Summer Crop | | | | | |
| Legume History Description | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Residual Legume N (lb/A) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | | | No Previous Year Legume | | | 0 | | | No Previous Year Legume | | | 0 | | | No Previous Year Legume | | | 0 | | | No Previous Year Legume | | | | | |
| Net Nutrients Required (lb/A) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 125 | | | 50 | | | 70 | | | 125 | | | 50 | | | 70 | | | 125 | | | 50 | | | 70 | | |
| Manure Group | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Liquid Cattle Manure | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Units | | | | | | | | | | | | | | | | | | | | | | | | | | |
| lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | | | | | | | |
| Manure Nutrient Content | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (lbs/ton or 1000 gal) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | | | P2O5 | | | K2O | | | N | | | P2O5 | | | K2O | | | N | | | P2O5 | | | K2O | | |
| 29.68 | | | 15.20 | | | 37.70 | | | 29.68 | | | 15.20 | | | 37.70 | | | 10.67 | | | 10.02 | | | 16.82 | | |
| Application Season: Management | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (Incorporation, cover crops, etc.) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spring: Spring or summer utilization-Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization-Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | | | | | | | | | |
| Availability Factors | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (Total N or NH4-N & Organic N) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total N | | | NH4-N | | | Org. N | | | Total N | | | NH4-N | | | Org. N | | | Total N | | | NH4-N | | | Org. N | | |
| 0.20 | | | | | | | | | 0.20 | | | | | | | | | 0.20 | | | | | | | | |
| P Index Application Method | | | | | | | | | | | | | | | | | | | | | | | | | | |
| April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | | | | | | | | | |
| N Balanced Manure Rate (ton; gal/A) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | | | | | | | | | | |
| P Removal Balance Manure Rate | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (ton or gal/A; If required by P Index) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | | | | | | | | | | |
| Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | | | | | | | | | |
| P Index Value | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 51 | | | 51 | | | 69 | | | 46 | | | 46 | | | 60 | | | | | | | | | | | |
| Planned Manure Rate (ton or gal/A) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | | | | | | | | | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 47 | | | 122 | | | 302 | | | 47 | | | 122 | | | 302 | | | 21 | | | 100 | | | 168 | | |
| Nutrient Balance after Manure | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | | | -72 | | | -232 | | | 0 | | | -72 | | | -232 | | | 0 | | | -50 | | | -98 | | |
| Supplemental Fertilizer (lb/A) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| P Index Application Method | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | | | -72 | | | -232 | | | 0 | | | -72 | | | -232 | | | 0 | | | -50 | | | -98 | | |
| Multiple Application | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | | | | | | |

Phosphorus Index

[Go to NBS Input](#)

[Go to NBS Index](#)

Pennsylvania P Index Version 2

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | | CMU/Field ID | R1_2 Soybeans Liquid Manure Spring |
|---|--|---|---|---|---|--|---|------------------------------------|
| Is the CMU in a Special Protection watershed? | | Is the CMU in a Special Protection watershed? | | | | | If the answer is Yes to <u>any</u> of these questions, Part B must be used. | No |
| A significant farm management change as defined by Act 38? | | Is there a significant farm management change as defined by Act 38? | | | | | | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | | Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) | | | | | | 223 |
| Contributing Distance from CMU to receiving water <150 ft.? | | Is the Contributing Distance from this CMU to receiving water less than 150 ft.? | | | | | | No |
| Is winter manure application planned for this field ? | | Is winter manure application planned for this field ? | | | | | | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | | 223 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | | | 45 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | Fertilizer P (lb P2O5/acre) | | | | | | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - | |
| SUPPLEMENTAL P FERTILIZER | Fertilizer P (lb P2O5/acre) | | | | | | 0 | |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ² | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - | |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | | | 0 |
| MANURE P RATE | Manure P (lb P2O5/acre) | | | | | | 122 | |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | 0.6 | |
| P SOURCE COEFFICIENT ³ | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | | 0.8 | |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | | | 59 |
| Source Factor Sum | | | | | | | | 104 |
| PART B: TRANSPORT FACTORS EROSION | | Soil Loss (ton/acre/yr) | | | | | | 0.68 |
| RUNOFF POTENTIAL | 0 <i>Drainage Class is Excessively</i> | 2 <i>Drainage Class is Somewhat Excessively</i> | 4 <i>Drainage Class is Well/Moderately Well</i> | 6 <i>Drainage Class is Somewhat Poorly</i> | 8 <i>Drainage Class is Poorly/Very Poorly</i> | | 4 | |
| SUBSURFACE DRAINAGE | 0 None | | 1 Random | | 2 ¹ Patterned | | 0 | |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | | 0 | |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | | | 5 |
| MODIFIED CONNECTIVITY | 0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | | 1.0 | |
| Transport Sum x Modified Connectivity / 24 | | | | | | | | 0.20 |
| P Index Value = 2 x Source x Transport | | | | | | | | 40 |

Low: 59 or less
Nitrogen based management

Medium: 60 to 79
Nitrogen based management

High: 80 to 99
Phosphorus limited to crop removal

Very High: 100 or greater
No Phosphorus applied

1 OR rapidly permeable soil near a stream

2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R1_2 Soybeans Liquid Manure Fall | R1_2 Soybeans Liquid Manure Winter | R1_2 Soybeans Solid Manure Spring | R1_2 Soybeans Solid Manure Fall | R1_2 Soybeans Solid Manure Winter | R3 Soybeans Liquid Manure Winter | R3 Soybeans Solid Manure Winter |
|--|----------------------------------|------------------------------------|-----------------------------------|---------------------------------|-----------------------------------|----------------------------------|---------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 223 | 223 | 223 | 223 | 223 | 157 | 157 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | Yes | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 223 | 223 | 223 | 223 | 223 | 157 | 157 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 45 | 45 | 45 | 45 | 45 | 31 | 31 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 100 | 100 | 100 | 122 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 1 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Metho | 59 | 98 | 48 | 48 | 80 | 98 | 80 |
| Source Factor Sum | 104 | 143 | 93 | 93 | 125 | 129 | 111 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 40 | 56 | 36 | 36 | 49 | 50 | 43 |

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R4 Soybeans Liquid Manure Spring | R4 Soybeans Liquid Manure Fall | R4 Soybeans Liquid Manure Winter | R4 Soybeans Solid Manure Spring | R4 Soybeans Solid Manure Fall | R4 Soybeans Solid Manure Winter | R5B Soybeans Liquid Manure Spring |
|--|----------------------------------|--------------------------------|----------------------------------|---------------------------------|-------------------------------|---------------------------------|-----------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 335 | 335 | 335 | 335 | 335 | 335 | 329 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 335 | 335 | 335 | 335 | 335 | 335 | 329 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 67 | 67 | 67 | 67 | 67 | 67 | 66 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 122 | 100 | 100 | 100 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 59 | 98 | 48 | 48 | 80 | 59 |
| Source Factor Sum | 126 | 126 | 165 | 115 | 115 | 147 | 125 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 49 | 49 | 64 | 45 | 45 | 57 | 49 |

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R5B Soybeans Liquid Manure Fall | R5B Soybeans Liquid Manure Winter | R5B Soybeans Solid Manure Spring | R5B Soybeans Solid Manure Fall | R5B Soybeans Solid Manure Winter | R6 Soybeans Liquid Manure Spring | R6 Soybeans Liquid Manure Fall |
|--|---------------------------------|-----------------------------------|----------------------------------|--------------------------------|----------------------------------|----------------------------------|--------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 329 | 329 | 329 | 329 | 329 | 370 | 370 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 329 | 329 | 329 | 329 | 329 | 370 | 370 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 66 | 66 | 66 | 66 | 66 | 74 | 74 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 100 | 100 | 100 | 122 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 98 | 48 | 48 | 80 | 59 | 59 |
| Source Factor Sum | 125 | 164 | 114 | 114 | 146 | 133 | 133 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 49 | 64 | 44 | 44 | 57 | 52 | 52 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R6 Soybeans Liquid Manure Winter | R6 Soybeans Solid Manure Spring | R6 Soybeans Solid Manure Fall | R6 Soybeans Solid Manure Winter | R7 Soybeans Liquid Manure Spring | R7 Soybeans Liquid Manure Fall | R7 Soybeans Liquid Manure Winter |
|--|----------------------------------|---------------------------------|-------------------------------|---------------------------------|----------------------------------|--------------------------------|----------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 370 | 370 | 370 | 370 | 355 | 355 | 355 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 370 | 370 | 370 | 370 | 355 | 355 | 355 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 74 | 74 | 74 | 74 | 71 | 71 | 71 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 100 | 100 | 100 | 122 | 122 | 122 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 98 | 48 | 48 | 80 | 59 | 59 | 98 |
| Source Factor Sum | 172 | 122 | 122 | 154 | 130 | 130 | 169 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 67 | 48 | 48 | 60 | 51 | 51 | 66 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R7 Soybeans Solid Manure Spring | R7 Soybeans Solid Manure Fall | R7 Soybeans Solid Manure Winter | R8 Soybeans Liquid Manure Spring | R8 Soybeans Liquid Manure Fall | R8 Soybeans Liquid Manure Winter | R8 Soybeans Solid Manure Spring |
|--|---------------------------------|-------------------------------|---------------------------------|----------------------------------|--------------------------------|----------------------------------|---------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 355 | 355 | 355 | 208 | 208 | 208 | 208 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 355 | 355 | 355 | 208 | 208 | 208 | 208 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 71 | 71 | 71 | 42 | 42 | 42 | 42 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 100 | 122 | 122 | 122 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 48 | 48 | 80 | 59 | 59 | 98 | 48 |
| Source Factor Sum | 119 | 119 | 151 | 101 | 101 | 140 | 90 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 46 | 46 | 59 | 39 | 39 | 54 | 35 |

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R8 Soybeans Solid Manure Fall | R8 Soybeans Solid Manure Winter | R9 Soybeans Liquid Manure Spring | R9 Soybeans Liquid Manure Fall | R9 Soybeans Liquid Manure Winter | R9 Soybeans Solid Manure Spring | R9 Soybeans Solid Manure Fall |
|--|-------------------------------|---------------------------------|----------------------------------|--------------------------------|----------------------------------|---------------------------------|-------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 208 | 208 | 269 | 269 | 269 | 269 | 269 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 208 | 208 | 269 | 269 | 269 | 269 | 269 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 42 | 42 | 54 | 54 | 54 | 54 | 54 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 122 | 122 | 122 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 48 | 80 | 59 | 59 | 98 | 48 | 48 |
| Source Factor Sum | 90 | 122 | 113 | 113 | 152 | 102 | 102 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 35 | 47 | 44 | 44 | 59 | 40 | 40 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R9 Soybeans Solid Manure Winter | R10 Soybeans Liquid Manure Spring | R10 Soybeans Liquid Manure Fall | R10 Soybeans Liquid Manure Winter | R10 Soybeans Solid Manure Spring | R10 Soybeans Solid Manure Fall | R10 Soybeans Solid Manure Winter |
|--|---------------------------------|-----------------------------------|---------------------------------|-----------------------------------|----------------------------------|--------------------------------|----------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 269 | 326 | 326 | 326 | 326 | 326 | 326 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 269 | 326 | 326 | 326 | 326 | 326 | 326 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 54 | 65 | 65 | 65 | 65 | 65 | 65 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 122 | 122 | 122 | 100 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 80 | 59 | 59 | 98 | 48 | 48 | 80 |
| Source Factor Sum | 134 | 124 | 124 | 163 | 113 | 113 | 145 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 52 | 50 | 50 | 65 | 45 | 45 | 58 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R11 Soybeans Liquid Manure Spring | R11 Soybeans Liquid Manure Fall | R11 Soybeans Liquid Manure Winter | R11 Soybeans Solid Manure Spring | R11 Soybeans Solid Manure Fall | R11 Soybeans Solid Manure Winter | R12 Soybeans Liquid Manure Spring |
|--|-----------------------------------|---------------------------------|-----------------------------------|----------------------------------|--------------------------------|----------------------------------|-----------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 268 | 268 | 268 | 268 | 268 | 268 | 270 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 268 | 268 | 268 | 268 | 268 | 268 | 270 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 122 | 100 | 100 | 100 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 59 | 98 | 48 | 48 | 80 | 59 |
| Source Factor Sum | 113 | 113 | 152 | 102 | 102 | 134 | 113 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 45 | 45 | 61 | 41 | 41 | 53 | 45 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R12 Soybeans Liquid Manure Fall | R12 Soybeans Liquid Manure Winter | R12 Soybeans Solid Manure Spring | R12 Soybeans Solid Manure Fall | R12 Soybeans Solid Manure Winter | R13 Soybeans Liquid Manure Spring | R13 Soybeans Liquid Manure Fall |
|--|---------------------------------|-----------------------------------|----------------------------------|--------------------------------|----------------------------------|-----------------------------------|---------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 270 | 270 | 270 | 270 | 270 | 312 | 312 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 270 | 270 | 270 | 270 | 270 | 312 | 312 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 54 | 54 | 54 | 54 | 54 | 62 | 62 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 100 | 100 | 100 | 122 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Metho | 59 | 98 | 48 | 48 | 80 | 59 | 59 |
| Source Factor Sum | 113 | 152 | 102 | 102 | 134 | 121 | 121 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 45 | 61 | 41 | 41 | 53 | 48 | 48 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R13 Soybeans Liquid Manure Winter | R13 Soybeans Solid Manure Spring | R13 Soybeans Solid Manure Fall | R13 Soybeans Solid Manure Winter | R14 Soybeans Liquid Manure Spring | R14 Soybeans Liquid Manure Fall | R14 Soybeans Liquid Manure Winter |
|--|-----------------------------------|----------------------------------|--------------------------------|----------------------------------|-----------------------------------|---------------------------------|-----------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 312 | 312 | 312 | 312 | 283 | 283 | 283 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 312 | 312 | 312 | 312 | 283 | 283 | 283 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 62 | 62 | 62 | 62 | 57 | 57 | 57 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 100 | 100 | 100 | 122 | 122 | 122 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 98 | 48 | 48 | 80 | 59 | 59 | 98 |
| Source Factor Sum | 160 | 110 | 110 | 142 | 116 | 116 | 155 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.791 | 0.791 | 0.791 | 0.791 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 64 | 44 | 44 | 57 | 53 | 53 | 71 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R14 Soybeans Solid Manure Spring | R14 Soybeans Solid Manure Fall | R14 Soybeans Solid Manure Winter | R15 Soybeans Liquid Manure Spring | R15 Soybeans Liquid Manure Fall | R15 Soybeans Liquid Manure Winter | R15 Soybeans Solid Manure Spring |
|--|----------------------------------|--------------------------------|----------------------------------|-----------------------------------|---------------------------------|-----------------------------------|----------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 283 | 283 | 283 | 283 | 283 | 283 | 283 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 283 | 283 | 283 | 283 | 283 | 283 | 283 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 57 | 57 | 57 | 57 | 57 | 57 | 57 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 100 | 122 | 122 | 122 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 48 | 48 | 80 | 59 | 59 | 98 | 48 |
| Source Factor Sum | 105 | 105 | 137 | 116 | 116 | 155 | 105 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 48 | 48 | 63 | 53 | 53 | 71 | 48 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R15 Soybeans Solid Manure Fall | R15 Soybeans Solid Manure Winter | R16 Soybeans Liquid Manure Spring | R16 Soybeans Liquid Manure Fall | R16 Soybeans Liquid Manure Winter | R16 Soybeans Solid Manure Spring | R16 Soybeans Solid Manure Fall |
|--|--------------------------------|----------------------------------|-----------------------------------|---------------------------------|-----------------------------------|----------------------------------|--------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 283 | 283 | 423 | 423 | 423 | 423 | 423 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 283 | 283 | 423 | 423 | 423 | 423 | 423 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 57 | 57 | 85 | 85 | 85 | 85 | 85 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 122 | 122 | 122 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 0.8 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Metho | 48 | 80 | 59 | 59 | 78 | 48 | 48 |
| Source Factor Sum | 105 | 137 | 144 | 144 | 163 | 133 | 133 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 48 | 63 | 66 | 66 | 75 | 61 | 61 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R16 Soybeans Solid Manure Winter | R17 Soybeans Liquid Manure Spring | R17 Soybeans Liquid Manure Fall | R17 Soybeans Liquid Manure Winter | R17 Soybeans Solid Manure Spring | R17 Soybeans Solid Manure Fall | R17 Soybeans Solid Manure Winter |
|--|----------------------------------|-----------------------------------|---------------------------------|-----------------------------------|----------------------------------|--------------------------------|----------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 423 | 256 | 256 | 256 | 256 | 256 | 256 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 423 | 256 | 256 | 256 | 256 | 256 | 256 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 85 | 51 | 51 | 51 | 51 | 51 | 51 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 122 | 122 | 122 | 100 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 80 | 59 | 59 | 98 | 48 | 48 | 80 |
| Source Factor Sum | 165 | 110 | 110 | 149 | 99 | 99 | 131 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 76 | 51 | 51 | 69 | 46 | 46 | 60 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Nutrient Balance Sheet Summary

Importing Farm: Gary Truckenmiller

Whole Farm Note: None

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|-----------------------------------|--------|-------|----------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R18 Soybeans Liquid Manure Spring | R18 | 5 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R18 Soybeans Liquid Manure Fall | R18 | 5 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R18 Soybeans Liquid Manure Winter | R18 | 5 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R18 Soybeans Solid Manure Spring | R18 | 5 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R18 Soybeans Solid Manure Fall | R18 | 5 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R18 Soybeans Solid Manure Winter | R18 | 5 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R19 Soybeans Liquid Manure Spring | R19 | 1.6 | Soybeans with Manure | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R19 Soybeans Liquid Manure Fall | R19 | 1.6 | Soybeans with Manure | Liquid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | | |
|---|--------|-------|-------------------------|-------------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | |
| R19 Soybeans Liquid Manure Winter | R19 | 1.6 | Soybeans with Manure | Liquid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals- Cover crop for silage | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -72 | -232 |
| R19 Soybeans Solid Manure Spring | R19 | 1.6 | Soybeans with Manure | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R19 Soybeans Solid Manure Fall | R19 | 1.6 | Soybeans with Manure | Solid Cattle Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |
| R19 Soybeans Solid Manure Winter | R19 | 1.6 | Soybeans with Manure | Solid Cattle Manure | Winter | Winter: Summer Utilization. Single crop corn or annuals- Cover crop for silage | 10 tons/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -50 | -98 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NBS Summary Notes

Importing Farm: Gary Truckenmiller

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---|----------------------|----------------------|--------------------------------------|--|--|
| R18 Soybeans Liquid Manure Spring | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R18 Soybeans Liquid Manure Fall | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R18 Soybeans Liquid Manure Winter | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R18 Soybeans Solid Manure Spring | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R18 Soybeans Solid Manure Fall | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R18 Soybeans Solid Manure Winter | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R19 Soybeans Liquid Manure Spring | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R19 Soybeans Liquid Manure Fall | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R19 Soybeans Liquid Manure Winter | Soybeans with Manure | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R19 Soybeans Solid Manure Spring | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--|----------------------|---------------------|--------------------------------------|--|--|
| R19 Soybeans Solid Manure Fall | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R19 Soybeans Solid Manure Winter | Soybeans with Manure | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| Nutrient Balance Sheets | | R18 Soybeans Liquid Manure Spring | | | R18 Soybeans Liquid Manure Fall | | | R18 Soybeans Liquid Manure Winter | | | R18 Soybeans Solid Manure Spring | | | R18 Soybeans Solid Manure Fall | | | R18 Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R18 | | | R18 | | | R18 | | | R18 | | | R18 | | | R18 | | |
| Acres | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 166 | | | 166 | | | 166 | | | 166 | | | 166 | | | 166 | | |
| P Index Part A Evaluation | | | | | | | | Winter | | | | | | | | | Winter | | |
| Part A Result | | N Based | | | N Based | | | Part B | | | N Based | | | N Based | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | | | | | | | Surface app. when frozen/snow covered | | | | | | | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | | | | | | | 72 | | | | | | | | | 62 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R19 Soybeans Liquid Manure Spring | | | R19 Soybeans Liquid Manure Fall | | | R19 Soybeans Liquid Manure Winter | | | R19 Soybeans Solid Manure Spring | | | R19 Soybeans Solid Manure Fall | | | R19 Soybeans Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R19 | | | R19 | | | R19 | | | R19 | | | R19 | | | R19 | | |
| Acres | | 1.6 | | | 1.6 | | | 1.6 | | | 1.6 | | | 1.6 | | | 1.6 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 293 | | | 293 | | | 293 | | | 293 | | | 293 | | | 293 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | | Soybeans with Manure | | |
| Planned Yield | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | | 50 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 | 160 | 50 | 70 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 | 125 | 50 | 70 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Winter: Summer Utilization. Single crop corn or annuals-Cover crop for silage | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 21,044 gal/A | | | 21,044 gal/A | | | 21,044 gal/A | | | 59 tons/A | | | 59 tons/A | | | 59 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 3,289 gal/A | | | 3,289 gal/A | | | 3,289 gal/A | | | 5 tons/A | | | 5 tons/A | | | 5 tons/A | | |
| | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | | Crop P Removal (lb/A) 50.0 | | |
| P Index Value | | 54 | | | 54 | | | 72 | | | 49 | | | 49 | | | 64 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 47 | 122 | 302 | 21 | 100 | 168 | 21 | 100 | 168 | 21 | 100 | 168 |
| Nutrient Balance after Manure | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Supplemental Fertilizer (lb/A) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -72 | -232 | 0 | -50 | -98 | 0 | -50 | -98 | 0 | -50 | -98 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

Phosphorus Index

[Go to NBS Input](#)

[Go to NBS Index](#)

Pennsylvania P Index Version 2

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | CMU/Field ID | R18 Soybeans Liquid Manure Winter |
|---|--|---|---|---|---|---|-----------------------------------|
| Is the CMU in a Special Protection watershed? | | Is the CMU in a Special Protection watershed? | | | | If the answer is Yes to <u>any</u> of these questions, Part B must be used. | No |
| A significant farm management change as defined by Act 38? | | Is there a significant farm management change as defined by Act 38? | | | | | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | | Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) | | | | | 166 |
| Contributing Distance from CMU to receiving water <150 ft.? | | Is the Contributing Distance from this CMU to receiving water less than 150 ft.? | | | | | No |
| Is winter manure application planned for this field ? | | Is winter manure application planned for this field ? | | | | | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | 166 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | | 33 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - |
| SUPPLEMENTAL P FERTILIZER | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | | 0 |
| MANURE P RATE | | Manure P (lb P2O5/acre) | | | | | 122 |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | 1 |
| P SOURCE COEFFICIENT ³ | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | | 98 |
| Source Factor Sum | | | | | | | 131 |
| PART B: TRANSPORT FACTORS EROSION | | Soil Loss (ton/acre/yr) | | | | | 0.55 |
| RUNOFF POTENTIAL | 0 <i>Drainage Class is Excessively</i> | 2 <i>Drainage Class is Somewhat Excessively</i> | 4 <i>Drainage Class is Well/Moderately Well</i> | 6 <i>Drainage Class is Somewhat Poorly</i> | 8 <i>Drainage Class is Poorly/Very Poorly</i> | | 4 |
| SUBSURFACE DRAINAGE | 0 None | | 1 Random | | 2 ¹ Patterned | | 0 |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | | 2 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | | 7 |
| MODIFIED CONNECTIVITY | 0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | | 1.0 |
| Transport Sum x Modified Connectivity / 24 | | | | | | | 0.27 |
| P Index Value = 2 x Source x Transport | | | | | | | 72 |

Low: 59 or less
Nitrogen based management

Medium: 60 to 79
Nitrogen based management

High: 80 to 99
Phosphorus limited to crop removal

Very High: 100 or greater
No Phosphorus applied

1 OR rapidly permeable soil near a stream

2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R18 Soybeans Solid Manure Winter | R19 Soybeans Liquid Manure Spring | R19 Soybeans Liquid Manure Fall | R19 Soybeans Liquid Manure Winter | R19 Soybeans Solid Manure Spring | R19 Soybeans Solid Manure Fall | R19 Soybeans Solid Manure Winter |
|--|----------------------------------|-----------------------------------|---------------------------------|-----------------------------------|----------------------------------|--------------------------------|----------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 166 | 293 | 293 | 293 | 293 | 293 | 293 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 166 | 293 | 293 | 293 | 293 | 293 | 293 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 33 | 59 | 59 | 59 | 59 | 59 | 59 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 122 | 122 | 122 | 100 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 80 | 59 | 59 | 98 | 48 | 48 | 80 |
| Source Factor Sum | 113 | 118 | 118 | 157 | 107 | 107 | 139 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.55 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 7 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.27 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 62 | 54 | 54 | 72 | 49 | 49 | 64 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Nutrient Balance Sheet Summary

Importing Farm: Gary Truckenmiller

Whole Farm Note: None

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|---------------------------------|--------|-------|-------|----------------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R1_2 Wheat Liquid Manure Spring | R1_2 | 14.9 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R1_2 Wheat Liquid Manure Fall | R1_2 | 14.9 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R1_2 Wheat Liquid Manure Winter | R1_2 | 14.9 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R1_2 Wheat Solid Manure Spring | R1_2 | 14.9 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R1_2 Wheat Solid Manure Fall | R1_2 | 14.9 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R1_2 Wheat Solid Manure Winter | R1_2 | 14.9 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |
| R3 Wheat Liquid Manure Spring | R3 | 4.3 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R3 Wheat Liquid Manure Fall | R3 | 4.3 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------|--------|-------|-------|----------------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R3 Wheat Liquid Manure Winter | R3 | 4.3 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R3 Wheat Solid Manure Spring | R3 | 4.3 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R3 Wheat Solid Manure Fall | R3 | 4.3 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R3 Wheat Solid Manure Winter | R3 | 4.3 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |
| R4 Wheat Liquid Manure Spring | R4 | 3.9 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R4 Wheat Liquid Manure Fall | R4 | 3.9 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R4 Wheat Liquid Manure Winter | R4 | 3.9 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R4 Wheat Solid Manure Spring | R4 | 3.9 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R4 Wheat Solid Manure Fall | R4 | 3.9 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R4 Wheat Solid Manure Winter | R4 | 3.9 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |
| R5B Wheat Liquid Manure Spring | R5B | 4.1 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------|--------|-------|-------|----------------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R5B Wheat Liquid Manure Fall | R5B | 4.1 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R5B Wheat Liquid Manure Winter | R5B | 4.1 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R5B Wheat Solid Manure Spring | R5B | 4.1 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R5B Wheat Solid Manure Fall | R5B | 4.1 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R5B Wheat Solid Manure Winter | R5B | 4.1 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |
| R6 Wheat Liquid Manure Spring | R6 | 5.1 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R6 Wheat Liquid Manure Fall | R6 | 5.1 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R6 Wheat Liquid Manure Winter | R6 | 5.1 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R6 Wheat Solid Manure Spring | R6 | 5.1 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R6 Wheat Solid Manure Fall | R6 | 5.1 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R6 Wheat Solid Manure Winter | R6 | 5.1 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|-------------------------------|--------|-------|-------|----------------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R7 Wheat Liquid Manure Spring | R7 | 3.1 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R7 Wheat Liquid Manure Fall | R7 | 3.1 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R7 Wheat Liquid Manure Winter | R7 | 3.1 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R7 Wheat Solid Manure Spring | R7 | 3.1 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R7 Wheat Solid Manure Fall | R7 | 3.1 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R7 Wheat Solid Manure Winter | R7 | 3.1 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |
| R8 Wheat Liquid Manure Spring | R8 | 9 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R8 Wheat Liquid Manure Fall | R8 | 9 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R8 Wheat Liquid Manure Winter | R8 | 9 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R8 Wheat Solid Manure Spring | R8 | 9 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R8 Wheat Solid Manure Fall | R8 | 9 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------|--------|-------|-------|----------------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R8 Wheat Solid Manure Winter | R8 | 9 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |
| R9 Wheat Liquid Manure Spring | R9 | 2.1 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R9 Wheat Liquid Manure Fall | R9 | 2.1 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R9 Wheat Liquid Manure Winter | R9 | 2.1 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R9 Wheat Solid Manure Spring | R9 | 2.1 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R9 Wheat Solid Manure Fall | R9 | 2.1 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R9 Wheat Solid Manure Winter | R9 | 2.1 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |
| R10 Wheat Liquid Manure Spring | R10 | 6.2 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R10 Wheat Liquid Manure Fall | R10 | 6.2 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R10 Wheat Liquid Manure Winter | R10 | 6.2 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R10 Wheat Solid Manure Spring | R10 | 6.2 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------|--------|-------|-------|----------------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R10 Wheat Solid Manure Fall | R10 | 6.2 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R10 Wheat Solid Manure Winter | R10 | 6.2 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |
| R11 Wheat Liquid Manure Spring | R11 | 2.2 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R11 Wheat Liquid Manure Fall | R11 | 2.2 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R11 Wheat Liquid Manure Winter | R11 | 2.2 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R11 Wheat Solid Manure Spring | R11 | 2.2 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R11 Wheat Solid Manure Fall | R11 | 2.2 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R11 Wheat Solid Manure Winter | R11 | 2.2 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |
| R12 Wheat Liquid Manure Spring | R12 | 3.3 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R12 Wheat Liquid Manure Fall | R12 | 3.3 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R12 Wheat Liquid Manure Winter | R12 | 3.3 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------|--------|-------|-------|----------------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R12 Wheat Solid Manure Spring | R12 | 3.3 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R12 Wheat Solid Manure Fall | R12 | 3.3 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R12 Wheat Solid Manure Winter | R12 | 3.3 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |
| R13 Wheat Liquid Manure Spring | R13 | 6.3 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R13 Wheat Liquid Manure Fall | R13 | 6.3 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R13 Wheat Liquid Manure Winter | R13 | 6.3 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R13 Wheat Solid Manure Spring | R13 | 6.3 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R13 Wheat Solid Manure Fall | R13 | 6.3 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R13 Wheat Solid Manure Winter | R13 | 6.3 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |
| R14 Wheat Liquid Manure Spring | R14 | 4 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R14 Wheat Liquid Manure Fall | R14 | 4 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------|--------|-------|-------|----------------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R14 Wheat Liquid Manure Winter | R14 | 4 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R14 Wheat Solid Manure Spring | R14 | 4 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R14 Wheat Solid Manure Fall | R14 | 4 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R14 Wheat Solid Manure Winter | R14 | 4 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |
| R15 Wheat Liquid Manure Spring | R15 | 3.6 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R15 Wheat Liquid Manure Fall | R15 | 3.6 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R15 Wheat Liquid Manure Winter | R15 | 3.6 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R15 Wheat Solid Manure Spring | R15 | 3.6 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R15 Wheat Solid Manure Fall | R15 | 3.6 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R15 Wheat Solid Manure Winter | R15 | 3.6 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |
| R16 Wheat Liquid Manure Spring | R16 | 3.3 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------|--------|-------|-------|----------------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R16 Wheat Liquid Manure Fall | R16 | 3.3 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R16 Wheat Liquid Manure Winter | R16 | 3.3 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R16 Wheat Solid Manure Spring | R16 | 3.3 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R16 Wheat Solid Manure Fall | R16 | 3.3 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R16 Wheat Solid Manure Winter | R16 | 3.3 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |
| R17 Wheat Liquid Manure Spring | R17 | 2.2 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R17 Wheat Liquid Manure Fall | R17 | 2.2 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R17 Wheat Liquid Manure Winter | R17 | 2.2 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R17 Wheat Solid Manure Spring | R17 | 2.2 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R17 Wheat Solid Manure Fall | R17 | 2.2 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R17 Wheat Solid Manure Winter | R17 | 2.2 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NBS Summary Notes

Importing Farm: Gary Truckenmiller

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---------------------------------|-------|----------------------|--------------------------------------|--|--|
| R1_2 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R1_2 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R1_2 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R1_2 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R1_2 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R1_2 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R3 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R3 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R3 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R3 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--------------------------------|-------|----------------------|--------------------------------------|--|--|
| R3 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R3 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R4 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R4 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R4 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R4 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R4 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R4 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R5B Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R5B Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--------------------------------|-------|----------------------|--------------------------------------|--|--|
| R5B Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R5B Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R5B Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R5B Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R6 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R6 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R6 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R6 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R6 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R6 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|-------------------------------|-------|----------------------|--------------------------------------|--|--|
| R7 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R7 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R7 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R7 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R7 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R7 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R8 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R8 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R8 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R8 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R8 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--------------------------------|-------|----------------------|--------------------------------------|--|--|
| R8 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R9 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R9 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R9 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R9 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R9 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R9 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R10 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R10 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R10 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--------------------------------|-------|----------------------|--------------------------------------|--|--|
| R10 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R10 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R10 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R11 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R11 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R11 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R11 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R11 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R11 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R12 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R12 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--------------------------------|-------|----------------------|--------------------------------------|--|--|
| R12 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R12 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R12 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R12 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R13 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R13 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R13 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R13 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R13 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R13 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

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|--------------------------------|-------|----------------------|--------------------------------------|--|--|
| R14 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R14 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R14 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R14 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R14 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R14 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R15 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R15 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R15 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R15 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R15 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |

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|--------------------------------|-------|----------------------|--------------------------------------|--|--|
| R15 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R16 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R16 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R16 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may not be applied to this field if it is snow or ice covered. |
| R16 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R16 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R16 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R17 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R17 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R17 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

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| R17 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R17 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R17 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| Nutrient Balance Sheets | R1_2 Wheat Liquid Manure Spring | | | R1_2 Wheat Liquid Manure Fall | | | R1_2 Wheat Liquid Manure Winter | | | R1_2 Wheat Solid Manure Spring | | | R1_2 Wheat Solid Manure Fall | | | R1_2 Wheat Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | |
| Fields | R1_2 | | | R1_2 | | | R1_2 | | | R1_2 | | | R1_2 | | | R1_2 | | |
| Acres | 14.9 | | | 14.9 | | | 14.9 | | | 14.9 | | | 14.9 | | | 14.9 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 223 | | | 223 | | | 223 | | | 223 | | | 223 | | | 223 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | 40 | | | 40 | | | 41 | | | 36 | | | 36 | | | 49 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | | R3 Wheat Liquid Manure Spring | | | R3 Wheat Liquid Manure Fall | | | R3 Wheat Liquid Manure Winter | | | R3 Wheat Solid Manure Spring | | | R3 Wheat Solid Manure Fall | | | R3 Wheat Solid Manure Winter | | |
|--|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | | |
| Fields | | | R3 | | | R3 | | | R3 | | | R3 | | | R3 | | | R3 | | |
| Acres | | | 4.3 | | | 4.3 | | | 4.3 | | | 4.3 | | | 4.3 | | | 4.3 | | |
| NBS Option | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | | 157 | | | 157 | | | 157 | | | 157 | | | 157 | | | 157 | | |
| P Index Part A Evaluation | | | | | | | | | Winter | | | | | | | | | Winter | | |
| Part A Result | | | N Based | | | N Based | | | Part B | | | N Based | | | N Based | | | Part B | | |
| Crop | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | | | Select Method | | | Select Method | | | Surface app. when frozen/snow covered | | | Select Method | | | Select Method | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | | | | | | | | | 36 | | | | | | | | | 43 | | |
| Planned Manure Rate (ton or gal/A) | | | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | | | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | | | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R4 Wheat Liquid Manure Spring | | | R4 Wheat Liquid Manure Fall | | | R4 Wheat Liquid Manure Winter | | | R4 Wheat Solid Manure Spring | | | R4 Wheat Solid Manure Fall | | | R4 Wheat Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R4 | | | R4 | | | R4 | | | R4 | | | R4 | | | R4 | | |
| Acres | | 3.9 | | | 3.9 | | | 3.9 | | | 3.9 | | | 3.9 | | | 3.9 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 335 | | | 335 | | | 335 | | | 335 | | | 335 | | | 335 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | | 49 | | | 49 | | | 50 | | | 45 | | | 45 | | | 57 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R5B Wheat Liquid Manure Spring | | | R5B Wheat Liquid Manure Fall | | | R5B Wheat Liquid Manure Winter | | | R5B Wheat Solid Manure Spring | | | R5B Wheat Solid Manure Fall | | | R5B Wheat Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R5B | | | R5B | | | R5B | | | R5B | | | R5B | | | R5B | | |
| Acres | | 4.1 | | | 4.1 | | | 4.1 | | | 4.1 | | | 4.1 | | | 4.1 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 329 | | | 329 | | | 329 | | | 329 | | | 329 | | | 329 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | | 49 | | | 49 | | | 49 | | | 44 | | | 44 | | | 57 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R6 Wheat Liquid Manure Spring | | | R6 Wheat Liquid Manure Fall | | | R6 Wheat Liquid Manure Winter | | | R6 Wheat Solid Manure Spring | | | R6 Wheat Solid Manure Fall | | | R6 Wheat Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R6 | | | R6 | | | R6 | | | R6 | | | R6 | | | R6 | | |
| Acres | | 5.1 | | | 5.1 | | | 5.1 | | | 5.1 | | | 5.1 | | | 5.1 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 370 | | | 370 | | | 370 | | | 370 | | | 370 | | | 370 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | | 52 | | | 52 | | | 53 | | | 48 | | | 48 | | | 60 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R7 Wheat Liquid Manure Spring | | | R7 Wheat Liquid Manure Fall | | | R7 Wheat Liquid Manure Winter | | | R7 Wheat Solid Manure Spring | | | R7 Wheat Solid Manure Fall | | | R7 Wheat Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R7 | | | R7 | | | R7 | | | R7 | | | R7 | | | R7 | | |
| Acres | | 3.1 | | | 3.1 | | | 3.1 | | | 3.1 | | | 3.1 | | | 3.1 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 355 | | | 355 | | | 355 | | | 355 | | | 355 | | | 355 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | | 51 | | | 51 | | | 51 | | | 46 | | | 46 | | | 59 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R8 Wheat Liquid Manure Spring | | | R8 Wheat Liquid Manure Fall | | | R8 Wheat Liquid Manure Winter | | | R8 Wheat Solid Manure Spring | | | R8 Wheat Solid Manure Fall | | | R8 Wheat Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R8 | | | R8 | | | R8 | | | R8 | | | R8 | | | R8 | | |
| Acres | | 9.0 | | | 9.0 | | | 9.0 | | | 9.0 | | | 9.0 | | | 9.0 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 208 | | | 208 | | | 208 | | | 208 | | | 208 | | | 208 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | | 39 | | | 39 | | | 40 | | | 35 | | | 35 | | | 47 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R9 Wheat Liquid Manure Spring | | | R9 Wheat Liquid Manure Fall | | | R9 Wheat Liquid Manure Winter | | | R9 Wheat Solid Manure Spring | | | R9 Wheat Solid Manure Fall | | | R9 Wheat Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R9 | | | R9 | | | R9 | | | R9 | | | R9 | | | R9 | | |
| Acres | | 2.1 | | | 2.1 | | | 2.1 | | | 2.1 | | | 2.1 | | | 2.1 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 269 | | | 269 | | | 269 | | | 269 | | | 269 | | | 269 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | | 44 | | | 44 | | | 45 | | | 40 | | | 40 | | | 52 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R10 Wheat Liquid Manure Spring | | | R10 Wheat Liquid Manure Fall | | | R10 Wheat Liquid Manure Winter | | | R10 Wheat Solid Manure Spring | | | R10 Wheat Solid Manure Fall | | | R10 Wheat Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R10 | | | R10 | | | R10 | | | R10 | | | R10 | | | R10 | | |
| Acres | | 6.2 | | | 6.2 | | | 6.2 | | | 6.2 | | | 6.2 | | | 6.2 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 326 | | | 326 | | | 326 | | | 326 | | | 326 | | | 326 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | | 50 | | | 50 | | | 50 | | | 45 | | | 45 | | | 58 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R11 Wheat Liquid Manure Spring | | | R11 Wheat Liquid Manure Fall | | | R11 Wheat Liquid Manure Winter | | | R11 Wheat Solid Manure Spring | | | R11 Wheat Solid Manure Fall | | | R11 Wheat Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | R11 | | | R11 | | | R11 | | | R11 | | | R11 | | | R11 | | |
| Fields | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | |
| Acres | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 268 | | | 268 | | | 268 | | | 268 | | | 268 | | | 268 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | 45 | | | 45 | | | 46 | | | 41 | | | 41 | | | 53 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R12 Wheat Liquid Manure Spring | | | R12 Wheat Liquid Manure Fall | | | R12 Wheat Liquid Manure Winter | | | R12 Wheat Solid Manure Spring | | | R12 Wheat Solid Manure Fall | | | R12 Wheat Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R12 | | | R12 | | | R12 | | | R12 | | | R12 | | | R12 | | |
| Acres | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 270 | | | 270 | | | 270 | | | 270 | | | 270 | | | 270 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | | 45 | | | 45 | | | 46 | | | 41 | | | 41 | | | 53 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R13 Wheat Liquid Manure Spring | | | R13 Wheat Liquid Manure Fall | | | R13 Wheat Liquid Manure Winter | | | R13 Wheat Solid Manure Spring | | | R13 Wheat Solid Manure Fall | | | R13 Wheat Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | |
| Fields | R13 | | | R13 | | | R13 | | | R13 | | | R13 | | | R13 | | |
| Acres | 6.3 | | | 6.3 | | | 6.3 | | | 6.3 | | | 6.3 | | | 6.3 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 312 | | | 312 | | | 312 | | | 312 | | | 312 | | | 312 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | 48 | | | 48 | | | 49 | | | 44 | | | 44 | | | 57 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R14 Wheat Liquid Manure Spring | | | R14 Wheat Liquid Manure Fall | | | R14 Wheat Liquid Manure Winter | | | R14 Wheat Solid Manure Spring | | | R14 Wheat Solid Manure Fall | | | R14 Wheat Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R14 | | | R14 | | | R14 | | | R14 | | | R14 | | | R14 | | |
| Acres | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | | 53 | | | 53 | | | 54 | | | 48 | | | 48 | | | 63 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R15 Wheat Liquid Manure Spring | | | R15 Wheat Liquid Manure Fall | | | R15 Wheat Liquid Manure Winter | | | R15 Wheat Solid Manure Spring | | | R15 Wheat Solid Manure Fall | | | R15 Wheat Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R15 | | | R15 | | | R15 | | | R15 | | | R15 | | | R15 | | |
| Acres | | 3.6 | | | 3.6 | | | 3.6 | | | 3.6 | | | 3.6 | | | 3.6 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | | 283 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | | 53 | | | 53 | | | 54 | | | 48 | | | 48 | | | 63 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R16 Wheat Liquid Manure Spring | | | R16 Wheat Liquid Manure Fall | | | R16 Wheat Liquid Manure Winter | | | R16 Wheat Solid Manure Spring | | | R16 Wheat Solid Manure Fall | | | R16 Wheat Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R16 | | | R16 | | | R16 | | | R16 | | | R16 | | | R16 | | |
| Acres | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | | 3.3 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 423 | | | 423 | | | 423 | | | 423 | | | 423 | | | 423 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Nov - Mar: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | | 66 | | | 66 | | | 62 | | | 61 | | | 61 | | | 76 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | R17 Wheat Liquid Manure Spring | | | R17 Wheat Liquid Manure Fall | | | R17 Wheat Liquid Manure Winter | | | R17 Wheat Solid Manure Spring | | | R17 Wheat Solid Manure Fall | | | R17 Wheat Solid Manure Winter | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | R17 | | | R17 | | | R17 | | | R17 | | | R17 | | | R17 | | |
| Fields | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | |
| Acres | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | | 2.2 | | |
| NBS Option | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | 256 | | | 256 | | | 256 | | | 256 | | | 256 | | | 256 | | |
| P Index Part A Evaluation | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | 51 | | | 51 | | | 52 | | | 46 | | | 46 | | | 60 | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

Phosphorus Index

[Go to NBS Input](#)

[Go to NBS Index](#)

Pennsylvania P Index Version 2

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | | CMU/Field ID | R1_2 Wheat Liquid Manure Spring |
|--|--|--|---|---|---|-----------------------------|---|---------------------------------|
| Is the CMU in a Special Protection watershed? A significant farm management change as defined by Act 38? Soil Test Mehlich 3 P greater than 200 ppm P? Contributing Distance from CMU to receiving water <150 ft.? Is winter manure application planned for this field ? | | Is the CMU in a Special Protection watershed? Is there a significant farm management change as defined by Act 38? Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) Is the Contributing Distance from this CMU to receiving water less than 150 ft.? Is winter manure application planned for this field ? | | | | | If the answer is Yes to <u>any</u> of these questions, Part B must be used. | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | | 223 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | | | 45 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | Fertilizer P (lb P2O5/acre) | | | | | | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - | |
| SUPPLEMENTAL P FERTILIZER | | | | | | Fertilizer P (lb P2O5/acre) | 0 | |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ² | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - | |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | | 0 | |
| MANURE P RATE | | | | | | Manure P (lb P2O5/acre) | 122 | |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | 0.6 | |
| P SOURCE COEFFICIENT ³ | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | | 0.8 | |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | | 59 | |
| Source Factor Sum | | | | | | | 104 | |
| PART B: TRANSPORT FACTORS EROSION | | Soil Loss (ton/acre/yr) | | | | | 0.68 | |
| RUNOFF POTENTIAL | 0 <i>Drainage Class is Excessively</i> | 2 <i>Drainage Class is Somewhat Excessively</i> | 4 <i>Drainage Class is Well/Moderately Well</i> | 6 <i>Drainage Class is Somewhat Poorly</i> | 8 <i>Drainage Class is Poorly/Very Poorly</i> | | 4 | |
| SUBSURFACE DRAINAGE | 0 None | | 1 Random | | 2 ¹ Patterned | | 0 | |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | | 0 | |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | | 5 | |
| MODIFIED CONNECTIVITY | 0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | | 1.0 | |
| Transport Sum x Modified Connectivity / 24 | | | | | | | 0.20 | |
| P Index Value = 2 x Source x Transport | | | | | | | 40 | |

Low: 59 or less
Nitrogen based management

Medium: 60 to 79
Nitrogen based management

High: 80 to 99
Phosphorus limited to crop removal

Very High: 100 or greater
No Phosphorus applied

1 OR rapidly permeable soil near a stream

2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R1_2 Wheat Liquid Manure Fall | R1_2 Wheat Liquid Manure Winter | R1_2 Wheat Solid Manure Spring | R1_2 Wheat Solid Manure Fall | R1_2 Wheat Solid Manure Winter | R3 Wheat Liquid Manure Winter | R3 Wheat Solid Manure Winter |
|--|-------------------------------|---------------------------------|--------------------------------|------------------------------|--------------------------------|-------------------------------|------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 223 | 223 | 223 | 223 | 223 | 157 | 157 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | Yes | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 223 | 223 | 223 | 223 | 223 | 157 | 157 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 45 | 45 | 45 | 45 | 45 | 31 | 31 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 76 | 100 | 100 | 100 | 76 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 1 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 61 | 48 | 48 | 80 | 61 | 80 |
| Source Factor Sum | 104 | 106 | 93 | 93 | 125 | 92 | 111 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 40 | 41 | 36 | 36 | 49 | 36 | 43 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R4 Wheat Liquid Manure Spring | R4 Wheat Liquid Manure Fall | R4 Wheat Liquid Manure Winter | R4 Wheat Solid Manure Spring | R4 Wheat Solid Manure Fall | R4 Wheat Solid Manure Winter | R5B Wheat Liquid Manure Spring |
|--|-------------------------------|-----------------------------|-------------------------------|------------------------------|----------------------------|------------------------------|--------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 335 | 335 | 335 | 335 | 335 | 335 | 329 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 335 | 335 | 335 | 335 | 335 | 335 | 329 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 67 | 67 | 67 | 67 | 67 | 67 | 66 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 76 | 100 | 100 | 100 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 59 | 61 | 48 | 48 | 80 | 59 |
| Source Factor Sum | 126 | 126 | 128 | 115 | 115 | 147 | 125 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 49 | 49 | 50 | 45 | 45 | 57 | 49 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R5B Wheat Liquid Manure Fall | R5B Wheat Liquid Manure Winter | R5B Wheat Solid Manure Spring | R5B Wheat Solid Manure Fall | R5B Wheat Solid Manure Winter | R6 Wheat Liquid Manure Spring | R6 Wheat Liquid Manure Fall |
|--|------------------------------|--------------------------------|-------------------------------|-----------------------------|-------------------------------|-------------------------------|-----------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 329 | 329 | 329 | 329 | 329 | 370 | 370 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 329 | 329 | 329 | 329 | 329 | 370 | 370 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 66 | 66 | 66 | 66 | 66 | 74 | 74 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 76 | 100 | 100 | 100 | 122 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 61 | 48 | 48 | 80 | 59 | 59 |
| Source Factor Sum | 125 | 127 | 114 | 114 | 146 | 133 | 133 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 49 | 49 | 44 | 44 | 57 | 52 | 52 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R6 Wheat Liquid Manure Winter | R6 Wheat Solid Manure Spring | R6 Wheat Solid Manure Fall | R6 Wheat Solid Manure Winter | R7 Wheat Liquid Manure Spring | R7 Wheat Liquid Manure Fall | R7 Wheat Liquid Manure Winter |
|--|-------------------------------|------------------------------|----------------------------|------------------------------|-------------------------------|-----------------------------|-------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 370 | 370 | 370 | 370 | 355 | 355 | 355 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 370 | 370 | 370 | 370 | 355 | 355 | 355 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 74 | 74 | 74 | 74 | 71 | 71 | 71 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 76 | 100 | 100 | 100 | 122 | 122 | 76 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 61 | 48 | 48 | 80 | 59 | 59 | 61 |
| Source Factor Sum | 135 | 122 | 122 | 154 | 130 | 130 | 132 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 53 | 48 | 48 | 60 | 51 | 51 | 51 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R7 Wheat Solid Manure Spring | R7 Wheat Solid Manure Fall | R7 Wheat Solid Manure Winter | R8 Wheat Liquid Manure Spring | R8 Wheat Liquid Manure Fall | R8 Wheat Liquid Manure Winter | R8 Wheat Solid Manure Spring |
|--|------------------------------|----------------------------|------------------------------|-------------------------------|-----------------------------|-------------------------------|------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 355 | 355 | 355 | 208 | 208 | 208 | 208 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 355 | 355 | 355 | 208 | 208 | 208 | 208 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 71 | 71 | 71 | 42 | 42 | 42 | 42 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 100 | 122 | 122 | 76 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 48 | 48 | 80 | 59 | 59 | 61 | 48 |
| Source Factor Sum | 119 | 119 | 151 | 101 | 101 | 103 | 90 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 46 | 46 | 59 | 39 | 39 | 40 | 35 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R8 Wheat Solid Manure Fall | R8 Wheat Solid Manure Winter | R9 Wheat Liquid Manure Spring | R9 Wheat Liquid Manure Fall | R9 Wheat Liquid Manure Winter | R9 Wheat Solid Manure Spring | R9 Wheat Solid Manure Fall |
|--|----------------------------|------------------------------|-------------------------------|-----------------------------|-------------------------------|------------------------------|----------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 208 | 208 | 269 | 269 | 269 | 269 | 269 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 208 | 208 | 269 | 269 | 269 | 269 | 269 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 42 | 42 | 54 | 54 | 54 | 54 | 54 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 122 | 122 | 76 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 48 | 80 | 59 | 59 | 61 | 48 | 48 |
| Source Factor Sum | 90 | 122 | 113 | 113 | 115 | 102 | 102 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 35 | 47 | 44 | 44 | 45 | 40 | 40 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R9 Wheat Solid Manure Winter | R10 Wheat Liquid Manure Spring | R10 Wheat Liquid Manure Fall | R10 Wheat Liquid Manure Winter | R10 Wheat Solid Manure Spring | R10 Wheat Solid Manure Fall | R10 Wheat Solid Manure Winter |
|--|------------------------------|--------------------------------|------------------------------|--------------------------------|-------------------------------|-----------------------------|-------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 269 | 326 | 326 | 326 | 326 | 326 | 326 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 269 | 326 | 326 | 326 | 326 | 326 | 326 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 54 | 65 | 65 | 65 | 65 | 65 | 65 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 122 | 122 | 76 | 100 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Metho | 80 | 59 | 59 | 61 | 48 | 48 | 80 |
| Source Factor Sum | 134 | 124 | 124 | 126 | 113 | 113 | 145 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.68 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 52 | 50 | 50 | 50 | 45 | 45 | 58 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R11 Wheat Liquid Manure Spring | R11 Wheat Liquid Manure Fall | R11 Wheat Liquid Manure Winter | R11 Wheat Solid Manure Spring | R11 Wheat Solid Manure Fall | R11 Wheat Solid Manure Winter | R12 Wheat Liquid Manure Spring |
|--|--------------------------------|------------------------------|--------------------------------|-------------------------------|-----------------------------|-------------------------------|--------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 268 | 268 | 268 | 268 | 268 | 268 | 270 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 268 | 268 | 268 | 268 | 268 | 268 | 270 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 122 | 76 | 100 | 100 | 100 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 59 | 59 | 61 | 48 | 48 | 80 | 59 |
| Source Factor Sum | 113 | 113 | 115 | 102 | 102 | 134 | 113 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 45 | 45 | 46 | 41 | 41 | 53 | 45 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R12 Wheat Liquid Manure Fall | R12 Wheat Liquid Manure Winter | R12 Wheat Solid Manure Spring | R12 Wheat Solid Manure Fall | R12 Wheat Solid Manure Winter | R13 Wheat Liquid Manure Spring | R13 Wheat Liquid Manure Fall |
|--|------------------------------|--------------------------------|-------------------------------|-----------------------------|-------------------------------|--------------------------------|------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 270 | 270 | 270 | 270 | 270 | 312 | 312 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 270 | 270 | 270 | 270 | 270 | 312 | 312 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 54 | 54 | 54 | 54 | 54 | 62 | 62 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 122 | 76 | 100 | 100 | 100 | 122 | 122 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Metho | 59 | 61 | 48 | 48 | 80 | 59 | 59 |
| Source Factor Sum | 113 | 115 | 102 | 102 | 134 | 121 | 121 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 | 0.791 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| P Index Value = 2 x Source x Transport | 45 | 46 | 41 | 41 | 53 | 48 | 48 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R13 Wheat Liquid Manure Winter | R13 Wheat Solid Manure Spring | R13 Wheat Solid Manure Fall | R13 Wheat Solid Manure Winter | R14 Wheat Liquid Manure Spring | R14 Wheat Liquid Manure Fall | R14 Wheat Liquid Manure Winter |
|--|--------------------------------|-------------------------------|-----------------------------|-------------------------------|--------------------------------|------------------------------|--------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 312 | 312 | 312 | 312 | 283 | 283 | 283 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 312 | 312 | 312 | 312 | 283 | 283 | 283 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 62 | 62 | 62 | 62 | 57 | 57 | 57 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 76 | 100 | 100 | 100 | 122 | 122 | 76 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Metho | 61 | 48 | 48 | 80 | 59 | 59 | 61 |
| Source Factor Sum | 123 | 110 | 110 | 142 | 116 | 116 | 118 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.791 | 0.791 | 0.791 | 0.791 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 5 | 5 | 5 | 5 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.20 | 0.20 | 0.20 | 0.20 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 49 | 44 | 44 | 57 | 53 | 53 | 54 |

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R14 Wheat Solid Manure Spring | R14 Wheat Solid Manure Fall | R14 Wheat Solid Manure Winter | R15 Wheat Liquid Manure Spring | R15 Wheat Liquid Manure Fall | R15 Wheat Liquid Manure Winter | R15 Wheat Solid Manure Spring |
|--|-------------------------------|-----------------------------|-------------------------------|--------------------------------|------------------------------|--------------------------------|-------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 283 | 283 | 283 | 283 | 283 | 283 | 283 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | No | Yes | No | No | Yes | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 283 | 283 | 283 | 283 | 283 | 283 | 283 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 57 | 57 | 57 | 57 | 57 | 57 | 57 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 100 | 122 | 122 | 76 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Metho | 48 | 48 | 80 | 59 | 59 | 61 | 48 |
| Source Factor Sum | 105 | 105 | 137 | 116 | 116 | 118 | 105 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 48 | 48 | 63 | 53 | 53 | 54 | 48 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R15 Wheat Solid Manure Fall | R15 Wheat Solid Manure Winter | R16 Wheat Liquid Manure Spring | R16 Wheat Liquid Manure Fall | R16 Wheat Liquid Manure Winter | R16 Wheat Solid Manure Spring | R16 Wheat Solid Manure Fall |
|--|-----------------------------|-------------------------------|--------------------------------|------------------------------|--------------------------------|-------------------------------|-----------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 283 | 283 | 423 | 423 | 423 | 423 | 423 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | No | Yes | No | No | Yes | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 283 | 283 | 423 | 423 | 423 | 423 | 423 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 57 | 57 | 85 | 85 | 85 | 85 | 85 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 100 | 122 | 122 | 76 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 0.6 | 1 | 0.6 | 0.6 | 0.8 | 0.6 | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 48 | 80 | 59 | 59 | 49 | 48 | 48 |
| Source Factor Sum | 105 | 137 | 144 | 144 | 134 | 133 | 133 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 48 | 63 | 66 | 66 | 62 | 61 | 61 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R16 Wheat Solid Manure Winter | R17 Wheat Liquid Manure Spring | R17 Wheat Liquid Manure Fall | R17 Wheat Liquid Manure Winter | R17 Wheat Solid Manure Spring | R17 Wheat Solid Manure Fall | R17 Wheat Solid Manure Winter |
|--|-------------------------------|--------------------------------|------------------------------|--------------------------------|-------------------------------|-----------------------------|-------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 423 | 256 | 256 | 256 | 256 | 256 | 256 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 423 | 256 | 256 | 256 | 256 | 256 | 256 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 85 | 51 | 51 | 51 | 51 | 51 | 51 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 122 | 122 | 76 | 100 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Metho | 80 | 59 | 59 | 61 | 48 | 48 | 80 |
| Source Factor Sum | 165 | 110 | 110 | 112 | 99 | 99 | 131 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 76 | 51 | 51 | 52 | 46 | 46 | 60 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Nutrient Balance Sheet Summary

Importing Farm: Gary Truckenmiller

Whole Farm Note: None

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------|--------|-------|-------|----------------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R18 Wheat Liquid Manure Spring | R18 | 5 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R18 Wheat Liquid Manure Fall | R18 | 5 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R18 Wheat Liquid Manure Winter | R18 | 5 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R18 Wheat Solid Manure Spring | R18 | 5 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R18 Wheat Solid Manure Fall | R18 | 5 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R18 Wheat Solid Manure Winter | R18 | 5 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |
| R19 Wheat Liquid Manure Spring | R19 | 1.6 | Wheat | Liquid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |
| R19 Wheat Liquid Manure Fall | R19 | 1.6 | Wheat | Liquid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 22 | 0 | 0 | 0 | -42 | -158 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------------------------|--------|-------|-------|----------------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| R19 Wheat Liquid Manure Winter | R19 | 1.6 | Wheat | Liquid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 5000 gal/A | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | -45 |
| R19 Wheat Solid Manure Spring | R19 | 1.6 | Wheat | Solid Cattle Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R19 Wheat Solid Manure Fall | R19 | 1.6 | Wheat | Solid Cattle Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 10 tons/A | 0 | 0 | 0 | 48 | 0 | 0 | 0 | -20 | -24 |
| R19 Wheat Solid Manure Winter | R19 | 1.6 | Wheat | Solid Cattle Manure | Winter | Winter: Early Spring Utilization. Small grains and established grass or legume hay | 10 tons/A | 0 | 0 | 0 | 26 | 0 | 0 | 0 | -20 | -24 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NBS Summary Notes

Importing Farm: Gary Truckenmiller

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--------------------------------|-------|----------------------|--------------------------------------|--|--|
| R18 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R18 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R18 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R18 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R18 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R18 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R19 Wheat Liquid Manure Spring | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |
| R19 Wheat Liquid Manure Fall | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R19 Wheat Liquid Manure Winter | Wheat | Liquid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |
| R19 Wheat Solid Manure Spring | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|-------------------------------|-------|---------------------|--------------------------------------|--|--|
| R19 Wheat Solid Manure Fall | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall cattle manure application. |
| R19 Wheat Solid Manure Winter | Wheat | Solid Cattle Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported cattle manure within 100 feet of water wells or 150 feet of surface water. Imported cattle manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. To apply manure to this field during winter the following conditions must be met: The field must have at least 25% plant cover or crop residue at the time of manure application. Manure may be applied to this field if it is snow or ice covered. |

| Nutrient Balance Sheets | | R18 Wheat Liquid Manure Spring | | | R18 Wheat Liquid Manure Fall | | | R18 Wheat Liquid Manure Winter | | | R18 Wheat Solid Manure Spring | | | R18 Wheat Solid Manure Fall | | | R18 Wheat Solid Manure Winter | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R18 | | | R18 | | | R18 | | | R18 | | | R18 | | | R18 | | |
| Acres | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| For Option 2 enter maximum Soil Test | | 166 | | | 166 | | | 166 | | | 166 | | | 166 | | | 166 | | |
| For Option 3 enter soil test for PI | | | | | | | | | | | | | | | | | | | |
| P Index Part A Evaluation | | | | | | | | Winter | | | | | | | | | Winter | | |
| Part A Result | | N Based | | | N Based | | | Part B | | | N Based | | | N Based | | | Part B | | |
| Crop | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N P2O5 K2O | | | N P2O5 K2O | | | N P2O5 K2O | | | N P2O5 K2O | | | N P2O5 K2O | | | N P2O5 K2O | | |
| | | 80 80 144 | | | 80 80 144 | | | 80 80 144 | | | 80 80 144 | | | 80 80 144 | | | 80 80 144 | | |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) | | 0 0 0 | | | 0 0 0 | | | 0 0 0 | | | 0 0 0 | | | 0 0 0 | | | 0 0 0 | | |
| (Nutrients applied regardless of manure) | | | | | | | | | | | | | | | | | | | |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description | | 11 Continuously - Winter Crop | | | 11 Continuously - Winter Crop | | | 11 Continuously - Winter Crop | | | 11 Continuously - Winter Crop | | | 11 Continuously - Winter Crop | | | 11 Continuously - Winter Crop | | |
| Residual Manure N (lb/A) | | | | | | | | | | | | | | | | | | | |
| Legume History Description | | 0 No Previous Year Legume | | | 0 No Previous Year Legume | | | 0 No Previous Year Legume | | | 0 No Previous Year Legume | | | 0 No Previous Year Legume | | | 0 No Previous Year Legume | | |
| Residual Legume N (lb/A) | | | | | | | | | | | | | | | | | | | |
| Net Nutrients Required (lb/A) | | 69 80 144 | | | 69 80 144 | | | 69 80 144 | | | 69 80 144 | | | 69 80 144 | | | 69 80 144 | | |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content | | N P2O5 K2O | | | N P2O5 K2O | | | N P2O5 K2O | | | N P2O5 K2O | | | N P2O5 K2O | | | N P2O5 K2O | | |
| (lbs/ton or 1000 gal) | | 29.68 15.20 37.70 | | | 29.68 15.20 37.70 | | | 29.68 15.20 37.70 | | | 10.67 10.02 16.82 | | | 10.67 10.02 16.82 | | | 10.67 10.02 16.82 | | |
| Application Season: Management | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| (Incorporation, cover crops, etc.) | | | | | | | | | | | | | | | | | | | |
| Availability Factors | | Total N NH4-N Org. N | | | Total N NH4-N Org. N | | | Total N NH4-N Org. N | | | Total N NH4-N Org. N | | | Total N NH4-N Org. N | | | Total N NH4-N Org. N | | |
| (Total N or NH4-N & Organic N) | | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | | | | | | | | Surface app. when frozen/snow covered | | | | | | | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate | | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| (ton or gal/A; If required by P Index) | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | | | | | | | | 51 | | | | | | | | | 62 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate | | 47 122 302 | | | 47 122 302 | | | 59 76 189 | | | 21 100 168 | | | 21 100 168 | | | 43 100 168 | | |
| (lb/A) | | | | | | | | | | | | | | | | | | | |
| Nutrient Balance after Manure | | 22 -42 -158 | | | 22 -42 -158 | | | 10 4 -45 | | | 48 -20 -24 | | | 48 -20 -24 | | | 26 -20 -24 | | |
| Supplemental Fertilizer (lb/A) | | 22 0 0 | | | 22 0 0 | | | 10 0 0 | | | 48 0 0 | | | 48 0 0 | | | 26 0 0 | | |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 -42 -158 | | | 0 -42 -158 | | | 0 4 -45 | | | 0 -20 -24 | | | 0 -20 -24 | | | 0 -20 -24 | | |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

| Nutrient Balance Sheets | | R19 Wheat Liquid Manure Spring | | | R19 Wheat Liquid Manure Fall | | | R19 Wheat Liquid Manure Winter | | | R19 Wheat Solid Manure Spring | | | R19 Wheat Solid Manure Fall | | | R19 Wheat Solid Manure Winter | | |
|--|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| Crop Group Identification | | | | | | | | | | | | | | | | | | | |
| Fields | | R19 | | | R19 | | | R19 | | | R19 | | | R19 | | | R19 | | |
| Acres | | 1.6 | | | 1.6 | | | 1.6 | | | 1.6 | | | 1.6 | | | 1.6 | | |
| NBS Option | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | | Option 3 P Index Must be Completed | | |
| P Banking | | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| | | 293 | | | 293 | | | 293 | | | 293 | | | 293 | | | 293 | | |
| P Index Part A Evaluation | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | | Soil Test P | | | Soil Test P | | | Winter Soil Test P | | |
| Part A Result | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | | Wheat | | |
| Planned Yield | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | | 80 bu/A | | |
| Crop Removal Recommendations (LB/A) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 | 80 | 80 | 144 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | | 11 | Continuously - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 | 69 | 80 | 144 |
| Manure Group | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Liquid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | | Solid Cattle Manure | | |
| Units | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/ton | | | lb/ton | | | lb/ton | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 29.68 | 15.20 | 37.70 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 | 10.67 | 10.02 | 16.82 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Winter: Early Spring Utilization. Small grains and established grass or legume hay | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.20 | | | 0.20 | | | 0.40 | | | 0.20 | | | 0.20 | | | 0.40 | | |
| P Index Application Method | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | | 11,616 gal/A | | | 11,616 gal/A | | | 5,813 gal/A | | | 32 tons/A | | | 32 tons/A | | | 16 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | 5,263 gal/A | | | 5,263 gal/A | | | 5,263 gal/A | | | 8 tons/A | | | 8 tons/A | | | 8 tons/A | | |
| | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | | Crop P Removal (lb/A) 80.0 | | |
| P Index Value | | 54 | | | 54 | | | 55 | | | 49 | | | 49 | | | 64 | | |
| Planned Manure Rate (ton or gal/A) | | 8,000 gal/A | | | 8,000 gal/A | | | 5,000 gal/A | | | 10 tons/A | | | 10 tons/A | | | 10 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 47 | 122 | 302 | 47 | 122 | 302 | 59 | 76 | 189 | 21 | 100 | 168 | 21 | 100 | 168 | 43 | 100 | 168 |
| Nutrient Balance after Manure | | 22 | -42 | -158 | 22 | -42 | -158 | 10 | 4 | -45 | 48 | -20 | -24 | 48 | -20 | -24 | 26 | -20 | -24 |
| Supplemental Fertilizer (lb/A) | | 22 | 0 | 0 | 22 | 0 | 0 | 10 | 0 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 26 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | 0 | -42 | -158 | 0 | -42 | -158 | 0 | 4 | -45 | 0 | -20 | -24 | 0 | -20 | -24 | 0 | -20 | -24 |
| Multiple Application | | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

Phosphorus Index

[Go to NBS Input](#)

[Go to NBS Index](#)

Pennsylvania P Index Version 2

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | CMU/Field ID | R18 Wheat Liquid Manure Winter |
|---|--|---|---|---|---|---|--------------------------------|
| Is the CMU in a Special Protection watershed? | | Is the CMU in a Special Protection watershed? | | | | If the answer is Yes to <u>any</u> of these questions, Part B must be used. | No |
| A significant farm management change as defined by Act 38? | | Is there a significant farm management change as defined by Act 38? | | | | | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | | Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) | | | | | 166 |
| Contributing Distance from CMU to receiving water <150 ft.? | | Is the Contributing Distance from this CMU to receiving water less than 150 ft.? | | | | | No |
| Is winter manure application planned for this field ? | | Is winter manure application planned for this field ? | | | | | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | 166 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | | 33 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - |
| SUPPLEMENTAL P FERTILIZER | | Fertilizer P (lb P2O5/acre) | | | | | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | | 0 |
| MANURE P RATE | | Manure P (lb P2O5/acre) | | | | | 76 |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | 1 |
| P SOURCE COEFFICIENT ³ | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | | 61 |
| Source Factor Sum | | | | | | | 94 |
| PART B: TRANSPORT FACTORS EROSION | | Soil Loss (ton/acre/yr) | | | | | 0.55 |
| RUNOFF POTENTIAL | 0 <i>Drainage Class is Excessively</i> | 2 <i>Drainage Class is Somewhat Excessively</i> | 4 <i>Drainage Class is Well/Moderately Well</i> | 6 <i>Drainage Class is Somewhat Poorly</i> | 8 <i>Drainage Class is Poorly/Very Poorly</i> | | 4 |
| SUBSURFACE DRAINAGE | 0 None | | 1 Random | | 2 ¹ Patterned | | 0 |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | | 2 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | | 7 |
| MODIFIED CONNECTIVITY | 0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | | 1.0 |
| Transport Sum x Modified Connectivity / 24 | | | | | | | 0.27 |
| P Index Value = 2 x Source x Transport | | | | | | | 51 |

Low: 59 or less
Nitrogen based management

Medium: 60 to 79
Nitrogen based management

High: 80 to 99
Phosphorus limited to crop removal

Very High: 100 or greater
No Phosphorus applied

1 OR rapidly permeable soil near a stream

2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Phosphorus Index

| PART A: SCREENING TOOL CMU/Field ID | R18 Wheat Solid Manure Winter | R19 Wheat Liquid Manure Spring | R19 Wheat Liquid Manure Fall | R19 Wheat Liquid Manure Winter | R19 Wheat Solid Manure Spring | R19 Wheat Solid Manure Fall | R19 Wheat Solid Manure Winter |
|--|-------------------------------|--------------------------------|------------------------------|--------------------------------|-------------------------------|-----------------------------|-------------------------------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | No | No | No | No | No | No | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 166 | 293 | 293 | 293 | 293 | 293 | 293 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | No | No |
| Is winter manure application planned for this field ? | Yes | No | No | Yes | No | No | Yes |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 166 | 293 | 293 | 293 | 293 | 293 | 293 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 33 | 59 | 59 | 59 | 59 | 59 | 59 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 100 | 122 | 122 | 76 | 100 | 100 | 100 |
| MANURE APPLICATION METHOD ³ | 1 | 0.6 | 0.6 | 1 | 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 80 | 59 | 59 | 61 | 48 | 48 | 80 |
| Source Factor Sum | 113 | 118 | 118 | 120 | 107 | 107 | 139 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 0.55 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 7 | 6 | 6 | 6 | 6 | 6 | 6 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.27 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| P Index Value = 2 x Source x Transport | 62 | 54 | 54 | 55 | 49 | 49 | 64 |

Low: 59 or less

Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

**PA Technical Manual Supplement 10:
Winter Manure Application Matrix**

[Go to NBS Index](#)

User Notes for the Winter Manure Application Matrix

1. Under Act 38, any one of the following conditions meets the "winter" definition - see §83.201.
 - December 15 to February 28
 - Frozen ground (4 inch depth)
 - Snow-covered ground
2. All setbacks including those specific to winter manure application must be followed - see §83.294 (f) and (g).
 - No winter manure application within 100 ft. of an above ground agricultural drainage inlet where surface flow is toward the inlet.
 - No winter manure application within 100 ft. of a wetland (identified on National Wetland Inventory Maps) within the 100 year floodplain of an Exceptional Value stream segment if surface flow is toward the wetland.
3. Fields receiving winter manure applications must have 25% cover or an established cover crop - see §83.294 (g).

[Go to NBS Input](#)

Verify the CMU meets the required cover conditions described in User Note 3.

| CMU/Field ID | CMU/Field ID | | | | R1_2 Corn Silage Liquid Manure Winter | R1_2 Corn Silage Solid Manure Winter | |
|--|--|--|---|---|--|---|--|
| Does the CMU have 25% cover or an established cover crop? | Does the CMU have 25% cover or an established cover crop? | | | | Yes | Yes | |
| Evaluation Criteria | Evaluation Criteria Descriptions and Ranking Values | | | | | | |
| | 4 | 3 | 2 ^b | 1 ^c | | | |
| Field Slope | < 4 % | 4 - 8% | 9 - 15% | > 15% | 3 | 3 | |
| Distance from Water Bodies ^a Determined using Phosphorus Index Contributing Distance | > 350 ft. | 350 - 200 ft | 199 - 100 ft | <100 ft | 4 | 4 | |
| Drainage Class Determined using Phosphorus Index Runoff Potential | Somewhat Excessively OR Excessively | Well OR Moderately Well | Somewhat Poorly | Poorly OR Very Poorly | 3 | 3 | |
| Runoff Control | Recommended conservation practices are in place. <u>Very low potential</u> for concentrated flow. | Some conservation practices are in place. <u>Low potential</u> for concentrated flow. | Some conservation practices are in place. <u>Moderate potential</u> for concentrated flow. | No conservation practices are in place. <u>High potential</u> for concentrated flow. | 4 | 4 | |
| | | | | | 14 | 14 | |
| | | | | | Good | Good | |

^a Includes Perennial and Intermittent streams with defined bed and bank, Lakes, Ponds, Open sinkholes, and Active private and public water sources.

^b If a field receives a rating of "2" in any two categories the field is not recommended for winter application regardless of the final field Ranking Value.

^c If a field receives a rating of "1" in any one category the field is not recommended for winter application regardless of the final field Ranking Value.

| Recommended Winter Manure Application Prioritization | | |
|---|------------------|--|
| Ranking Value - Category | Ranking Category | Recommendation for Winter Manure Spreading Prioritization |
| Greater than 12 - Good | Good | These fields should receive first priority for winter manure application. |
| 8 to 12 - Fair | Fair | These fields should receive second priority for winter manure application. |
| Less than 8 - Poor | Poor | These fields are not recommended for winter manure application. |

**PA Technical Manual Supplement 10:
Winter Manure Application Matrix**

User Notes for the Winter Manure Application Matrix

1. Under Act 38, any one of the following conditions must be met:
 - December 15 to February 28
 - Frozen ground (4 inch depth)
 - Snow-covered ground
2. All setbacks including those specific to winter manure application:
 - No winter manure application within 100 ft. of an abscissa
 - No winter manure application within 100 ft. of a wetland
 Exceptional Value stream segment if surface flow is to the right
3. Fields receiving winter manure applications must have a cover crop.

Verify the CMU meets the required cover conditions described in User Note 3.

| CMU/Field ID | R3 Corn Silage Liquid Manure Winter | R3 Corn Silage Solid Manure Winter | R4 Corn Silage Liquid Manure Winter | R4 Corn Silage Solid Manure Winter | R5B Corn Silage Liquid Manure Winter | R5B Corn Silage Solid Manure Winter |
|--|-------------------------------------|------------------------------------|-------------------------------------|------------------------------------|--------------------------------------|-------------------------------------|
| Does the CMU have 25% cover or an established cover crop? | Yes | Yes | Yes | Yes | Yes | Yes |
| Evaluation Criteria | | | | | | |
| Field Slope | 4 | 4 | 3 | 3 | 3 | 3 |
| Distance from Water Bodies ^a Determined using Phosphorus Index Contributing Distance | 4 | 4 | 4 | 4 | 4 | 4 |
| Drainage Class Determined using Phosphorus Index Runoff Potential | 3 | 3 | 3 | 3 | 3 | 3 |
| Runoff Control | 4 | 4 | 4 | 4 | 4 | 4 |
| | 15 | 15 | 14 | 14 | 14 | 14 |
| | Good | Good | Good | Good | Good | Good |

^a Includes Perennial and Intermittent streams with defined bed and bank

^b If a field receives a rating of "2" in any two categories the field is not eligible

^c If a field receives a rating of "1" in any one category the field is not eligible

| Recommended Winter Manure Application Prioritization |
|---|
| <i>Ranking Value - Category</i> |
| Greater than 12 - Good |
| 8 to 12 - Fair |
| Less than 8 - Poor |

**PA Technical Manual Supplement 10:
Winter Manure Application Matrix**

User Notes for the Winter Manure Application Matrix

1. Under Act 38, any one of the following conditions must be met:
 - December 15 to February 28
 - Frozen ground (4 inch depth)
 - Snow-covered ground
2. All setbacks including those specific to winter manure application:
 - No winter manure application within 100 ft. of an abnormally high water table
 - No winter manure application within 100 ft. of a wetland
 - No winter manure application within 100 ft. of a wetland or Exceptional Value stream segment if surface flow is to the stream
3. Fields receiving winter manure applications must have a cover crop or other cover.

Verify the CMU meets the required cover conditions described in User Note 3.

| CMU/Field ID | R6 Corn Silage Liquid Manure Winter | R6 Corn Silage Solid Manure Winter | R7 Corn Silage Liquid Manure Winter | R7 Corn Silage Solid Manure Winter | R8 Corn Silage Liquid Manure Winter | R8 Corn Silage Solid Manure Winter |
|--|-------------------------------------|------------------------------------|-------------------------------------|------------------------------------|-------------------------------------|------------------------------------|
| Does the CMU have 25% cover or an established cover crop? | Yes | Yes | Yes | Yes | Yes | Yes |
| Evaluation Criteria | | | | | | |
| Field Slope | 2 | 2 | 2 | 2 | 3 | 3 |
| Distance from Water Bodies ^a Determined using Phosphorus Index Contributing Distance | 4 | 4 | 4 | 4 | 4 | 4 |
| Drainage Class Determined using Phosphorus Index Runoff Potential | 3 | 3 | 3 | 3 | 3 | 3 |
| Runoff Control | 4 | 4 | 4 | 4 | 4 | 4 |
| | 13 | 13 | 13 | 13 | 14 | 14 |
| | Good | Good | Good | Good | Good | Good |

^a Includes Perennial and Intermittent streams with defined bed and bank

^b If a field receives a rating of "2" in any two categories the field is not eligible for winter manure application

^c If a field receives a rating of "1" in any one category the field is not eligible for winter manure application

| Recommended Winter Manure Application Prioritization |
|---|
| <i>Ranking Value - Category</i> |
| Greater than 12 - Good |
| 8 to 12 - Fair |
| Less than 8 - Poor |

**PA Technical Manual Supplement 10:
Winter Manure Application Matrix**

User Notes for the Winter Manure Application Matrix

1. Under Act 38, any one of the following conditions must be met:
 - December 15 to February 28
 - Frozen ground (4 inch depth)
 - Snow-covered ground
2. All setbacks including those specific to winter manure application:
 - No winter manure application within 100 ft. of an abnormally high water table
 - No winter manure application within 100 ft. of a wetland or an Exceptional Value stream segment if surface flow is to the wetland
3. Fields receiving winter manure applications must have a cover crop.

Verify the CMU meets the required cover conditions described in User Note 3.

| CMU/Field ID | R9 Corn Silage Liquid Manure Winter | R9 Corn Silage Solid Manure Winter | R10 Corn Silage Liquid Manure Winter | R10 Corn Silage Solid Manure Winter | R11 Corn Silage Liquid Manure Winter | R11 Corn Silage Solid Manure Winter |
|--|-------------------------------------|------------------------------------|--------------------------------------|-------------------------------------|--------------------------------------|-------------------------------------|
| Does the CMU have 25% cover or an established cover crop? | Yes | Yes | Yes | Yes | Yes | Yes |
| Evaluation Criteria | | | | | | |
| Field Slope | 2 | 2 | 2 | 2 | 2 | 2 |
| Distance from Water Bodies ^a Determined using Phosphorus Index Contributing Distance | 4 | 4 | 4 | 4 | 4 | 4 |
| Drainage Class Determined using Phosphorus Index Runoff Potential | 3 | 3 | 3 | 3 | 3 | 3 |
| Runoff Control | 4 | 4 | 4 | 4 | 4 | 4 |
| | 13 | 13 | 13 | 13 | 13 | 13 |
| | Good | Good | Good | Good | Good | Good |

^a Includes Perennial and Intermittent streams with defined bed and bank

^b If a field receives a rating of "2" in any two categories the field is not eligible for winter manure application

^c If a field receives a rating of "1" in any one category the field is not eligible for winter manure application

| Recommended Winter Manure Application Prioritization |
|---|
| <i>Ranking Value - Category</i> |
| Greater than 12 - Good |
| 8 to 12 - Fair |
| Less than 8 - Poor |

**PA Technical Manual Supplement 10:
Winter Manure Application Matrix**

User Notes for the Winter Manure Application Matrix

1. Under Act 38, any one of the following conditions must be met:
 - December 15 to February 28
 - Frozen ground (4 inch depth)
 - Snow-covered ground
2. All setbacks including those specific to winter manure application:
 - No winter manure application within 100 ft. of an abscissa
 - No winter manure application within 100 ft. of a wetland
 - No winter manure application within 100 ft. of a wetland or an Exceptional Value stream segment if surface flow is to the stream
3. Fields receiving winter manure applications must have a cover crop.

Verify the CMU meets the required cover conditions described in User Note 3.

| CMU/Field ID | R12 Corn Silage Liquid Manure Winter | R12 Corn Silage Solid Manure Winter | R13 Corn Silage Liquid Manure Winter | R13 Corn Silage Solid Manure Winter | R14 Corn Silage Liquid Manure Winter | R14 Corn Silage Solid Manure Winter |
|--|--------------------------------------|-------------------------------------|--------------------------------------|-------------------------------------|--------------------------------------|-------------------------------------|
| Does the CMU have 25% cover or an established cover crop? | Yes | Yes | Yes | Yes | Yes | Yes |
| Evaluation Criteria | | | | | | |
| Field Slope | 2 | 2 | 2 | 2 | 2 | 2 |
| Distance from Water Bodies ^a Determined using Phosphorus Index Contributing Distance | 4 | 4 | 4 | 4 | 4 | 4 |
| Drainage Class Determined using Phosphorus Index Runoff Potential | 3 | 3 | 3 | 3 | 3 | 3 |
| Runoff Control | 4 | 4 | 4 | 4 | 4 | 4 |
| | 13 | 13 | 13 | 13 | 13 | 13 |
| | Good | Good | Good | Good | Good | Good |

^a Includes Perennial and Intermittent streams with defined bed and bank

^b If a field receives a rating of "2" in any two categories the field is not eligible for winter manure application

^c If a field receives a rating of "1" in any one category the field is not eligible for winter manure application

| Recommended Winter Manure Application Prioritization |
|---|
| <i>Ranking Value - Category</i> |
| Greater than 12 - Good |
| 8 to 12 - Fair |
| Less than 8 - Poor |

**PA Technical Manual Supplement 10:
Winter Manure Application Matrix**

User Notes for the Winter Manure Application Matrix

1. Under Act 38, any one of the following conditions must be met:
 - December 15 to February 28
 - Frozen ground (4 inch depth)
 - Snow-covered ground
2. All setbacks including those specific to winter manure application must be met:
 - No winter manure application within 100 ft. of an abscissa
 - No winter manure application within 100 ft. of a wetland
 - No winter manure application within 100 ft. of a wetland or Exceptional Value stream segment if surface flow is to the stream
3. Fields receiving winter manure applications must have a cover crop.

Verify the CMU meets the required cover conditions described in User Note 3.

| CMU/Field ID | R15 Corn Silage Liquid Manure Winter | R15 Corn Silage Solid Manure Winter | R16 Corn Silage Liquid Manure Winter | R16 Corn Silage Solid Manure Winter | R17 Corn Silage Liquid Manure Winter | R17 Corn Silage Solid Manure Winter |
|--|--------------------------------------|-------------------------------------|--------------------------------------|-------------------------------------|--------------------------------------|-------------------------------------|
| Does the CMU have 25% cover or an established cover crop? | Yes | Yes | Yes | Yes | Yes | Yes |
| Evaluation Criteria | | | | | | |
| Field Slope | 2 | 2 | 2 | 2 | 2 | 2 |
| Distance from Water Bodies ^a Determined using Phosphorus Index Contributing Distance | 4 | 4 | 4 | 4 | 4 | 4 |
| Drainage Class Determined using Phosphorus Index Runoff Potential | 3 | 3 | 3 | 3 | 3 | 3 |
| Runoff Control | 4 | 4 | 4 | 4 | 4 | 4 |
| | 13 | 13 | 13 | 13 | 13 | 13 |
| | Good | Good | Good | Good | Good | Good |

^a Includes Perennial and Intermittent streams with defined bed and bank

^b If a field receives a rating of "2" in any two categories the field is not eligible for winter manure application

^c If a field receives a rating of "1" in any one category the field is not eligible for winter manure application

| Recommended Winter Manure Application Prioritization |
|---|
| <i>Ranking Value - Category</i> |
| Greater than 12 - Good |
| 8 to 12 - Fair |
| Less than 8 - Poor |

**PA Technical Manual Supplement 10:
Winter Manure Application Matrix**

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User Notes for the Winter Manure Application Matrix

1. Under Act 38, any one of the following conditions meets the "winter" definition - see §83.201.
 - December 15 to February 28
 - Frozen ground (4 inch depth)
 - Snow-covered ground
2. All setbacks including those specific to winter manure application must be followed - see §83.294 (f) and (g).
 - No winter manure application within 100 ft. of an above ground agricultural drainage inlet where surface flow is toward the inlet.
 - No winter manure application within 100 ft. of a wetland (identified on National Wetland Inventory Maps) within the 100 year floodplain of an Exceptional Value stream segment if surface flow is toward the wetland.
3. Fields receiving winter manure applications must have 25% cover or an established cover crop - see §83.294 (g).

[Go to NBS Input](#)

Verify the CMU meets the required cover conditions described in User Note 3.

| CMU/Field ID | CMU/Field ID | | | | R18 Corn Silage Liquid Manure Winter | R18 Corn Silage Solid Manure Winter |
|--|--|--|---|---|--------------------------------------|-------------------------------------|
| Does the CMU have 25% cover or an established cover crop? | Does the CMU have 25% cover or an established cover crop? | | | | Yes | Yes |
| Evaluation Criteria | Evaluation Criteria Descriptions and Ranking Values | | | | | |
| | 4 | 3 | 2 ^b | 1 ^c | | |
| Field Slope | < 4 % | 4 - 8% | 9 - 15% | > 15% | 3 | 3 |
| Distance from Water Bodies ^a Determined using Phosphorus Index Contributing Distance | > 350 ft. | 350 - 200 ft | 199 - 100 ft | <100 ft | 4 | 4 |
| Drainage Class Determined using Phosphorus Index Runoff Potential | Somewhat Excessively OR Excessively | Well OR Moderately Well | Somewhat Poorly | Poorly OR Very Poorly | 3 | 3 |
| Runoff Control | Recommended conservation practices are in place. <u>Very low potential</u> for concentrated flow. | Some conservation practices are in place. <u>Low potential</u> for concentrated flow. | Some conservation practices are in place. <u>Moderate potential</u> for concentrated flow. | No conservation practices are in place. <u>High potential</u> for concentrated flow. | 4 | 4 |
| | | | | | 14 | 14 |
| | | | | | Good | Good |

^a Includes Perennial and Intermittent streams with defined bed and bank, Lakes, Ponds, Open sinkholes, and Active private and public water sources.

^b If a field receives a rating of "2" in any two categories the field is not recommended for winter application regardless of the final field Ranking Value.

^c If a field receives a rating of "1" in any one category the field is not recommended for winter application regardless of the final field Ranking Value.

| Recommended Winter Manure Application Prioritization | | |
|--|------------------|--|
| Ranking Value - Category | Ranking Category | Recommendation for Winter Manure Spreading Prioritization |
| Greater than 12 - Good | Good | These fields should receive first priority for winter manure application. |
| 8 to 12 - Fair | Fair | These fields should receive second priority for winter manure application. |
| Less than 8 - Poor | Poor | These fields are not recommended for winter manure application. |

**PA Technical Manual Supplement 10:
Winter Manure Application Matrix**

User Notes for the Winter Manure Application Matrix

1. Under Act 38, any one of the following conditions must be met:
 - December 15 to February 28
 - Frozen ground (4 inch depth)
 - Snow-covered ground
2. All setbacks including those specific to winter manure application:
 - No winter manure application within 100 ft. of an abscissa
 - No winter manure application within 100 ft. of a wetland
 - No winter manure application within 100 ft. of a wetland Exceptional Value stream segment if surface flow is to the stream
3. Fields receiving winter manure applications must have a cover crop.

Verify the CMU meets the required cover conditions described in User Note 3.

| CMU/Field ID | R19 Corn Silage Liquid Manure Winter | R19 Corn Silage Solid Manure Winter |
|--|--------------------------------------|-------------------------------------|
| Does the CMU have 25% cover or an established cover crop? | Yes | Yes |
| Evaluation Criteria | | |
| Field Slope | 2 | 2 |
| Distance from Water Bodies ^a Determined using Phosphorus Index Contributing Distance | 4 | 4 |
| Drainage Class Determined using Phosphorus Index Runoff Potential | 3 | 3 |
| Runoff Control | 4 | 4 |
| | 13 | 13 |
| | Good | Good |

^a Includes Perennial and Intermittent streams with defined bed and bank

^b If a field receives a rating of "2" in any two categories the field is not eligible for winter manure application

^c If a field receives a rating of "1" in any one category the field is not eligible for winter manure application

| Recommended Winter Manure Application Prioritization |
|---|
| <i>Ranking Value - Category</i> |
| Greater than 12 - Good |
| 8 to 12 - Fair |
| Less than 8 - Poor |

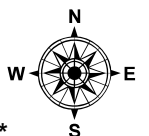
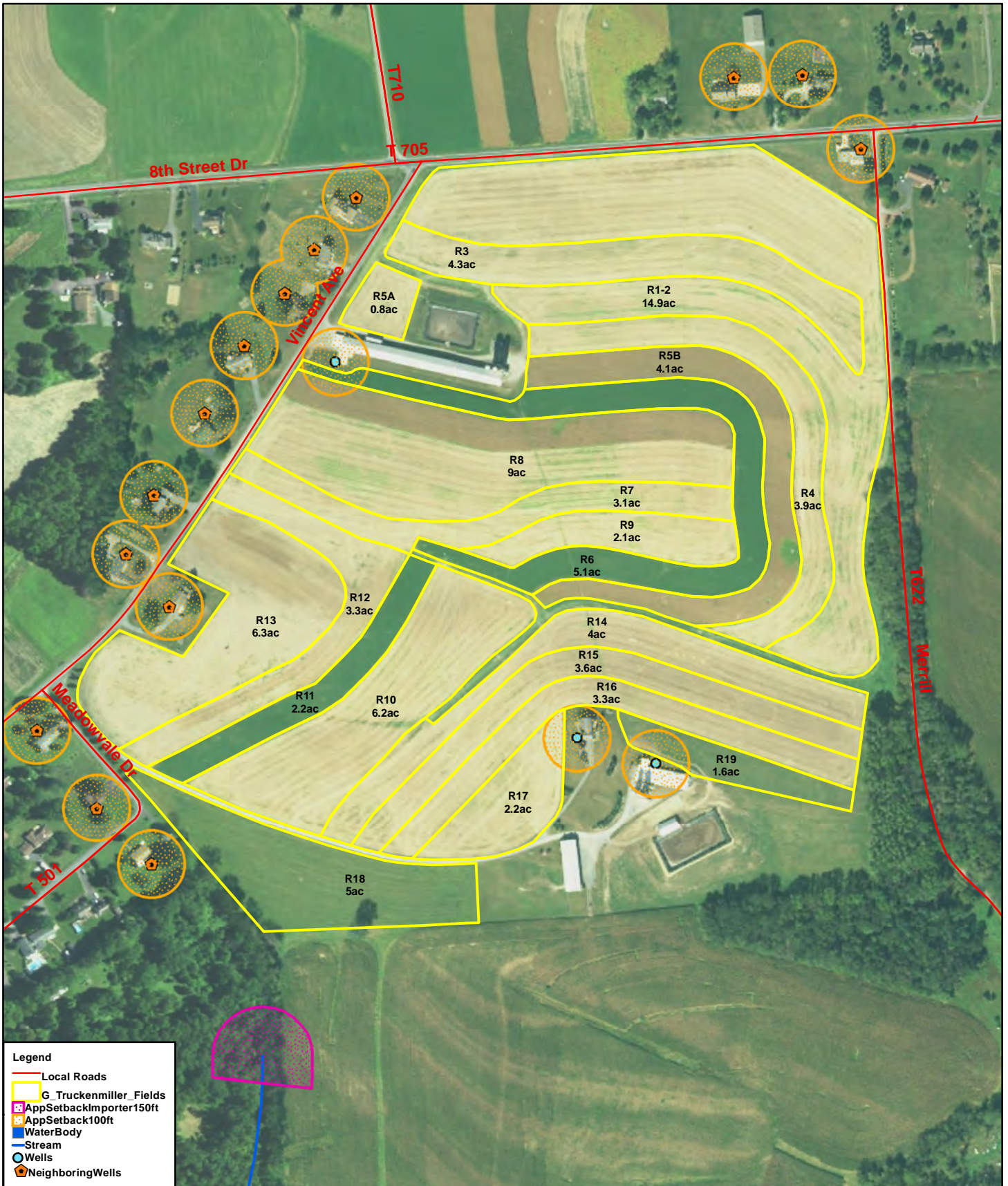
Manure Group Information

| Appendix 3 Manure Group Information | Liquid Cattle Manure | Solid Cattle Manure |
|---|----------------------|---------------------|
| Manure Report Date (note if averaging several reports) | July 9, 2018 | July 9, 2018 |
| Laboratory Name | Waypoint Analytical | Waypoint Analytical |
| Manure Type | Dairy | Dairy |
| Manure Unit (lbs/ton or 1000 gal) | lb/1000 gal | lb/ton |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 29.68 | 10.67 |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 15.71 | 5.40 |
| Total Organic N (lbs/ton or 1000 gal) | 13.97 | 5.27 |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 15.20 | 10.02 |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 37.70 | 16.82 |
| Percent Solids | 5.28 | 30.70 |
| PSC Value (analytical or book value) | 0.80 | 0.80 |

Operation Maps

Maps (or aerial photographs) required in Nutrient Balance Sheets must identify: road and road names adjacent to and within the operation; field identification, boundaries and acreage; manure application setback areas and vegetated buffers and associated landscape features (streams and other water bodies, sinkholes, and active water wells or springs); and location of in-field manure stacking areas (including each site in stacking area rotation).

Gary Truckenmiller NBS Field Map



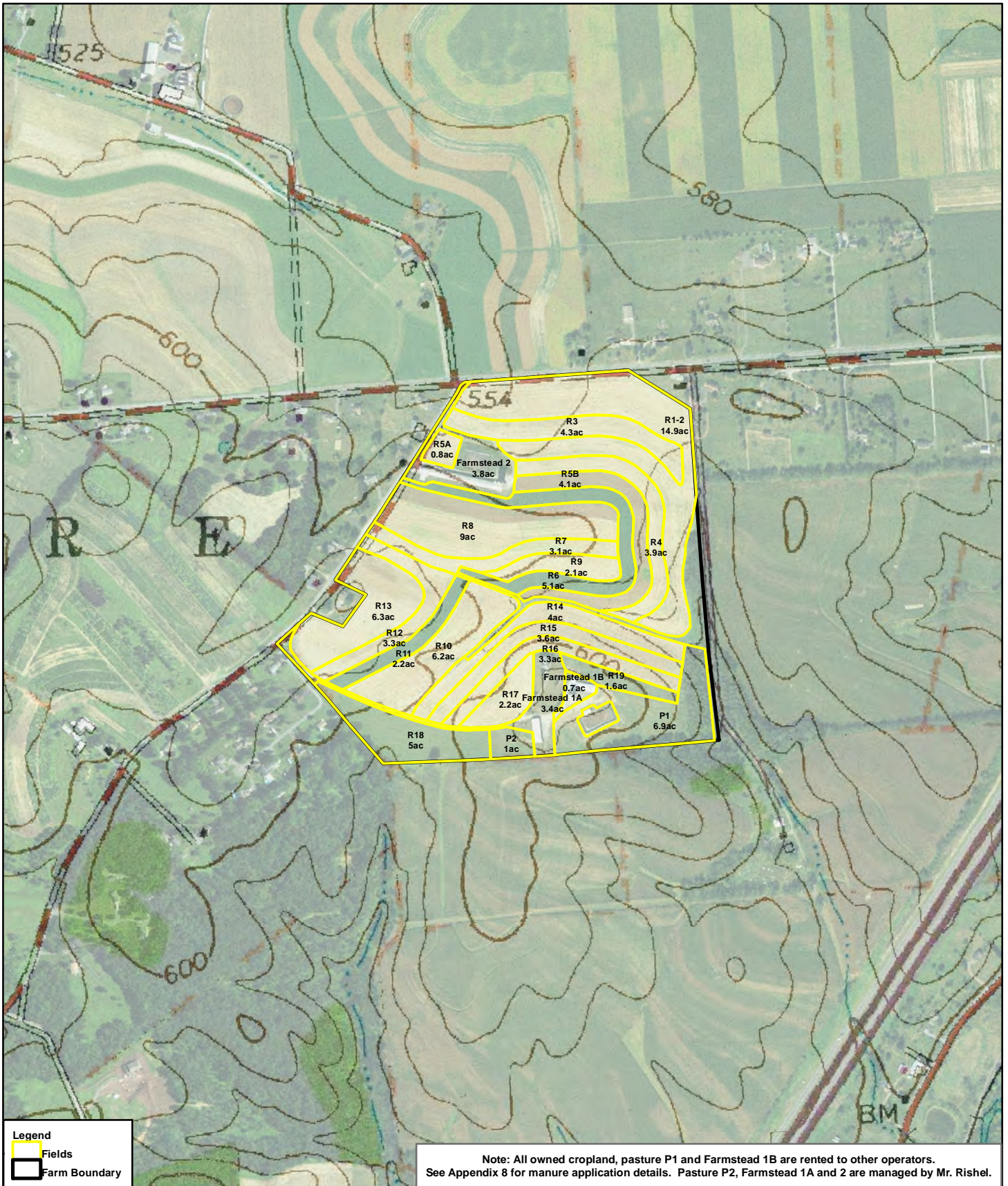
****Field verification of application setbacks and buffers is required prior to land application of manure.****

Appendix 9

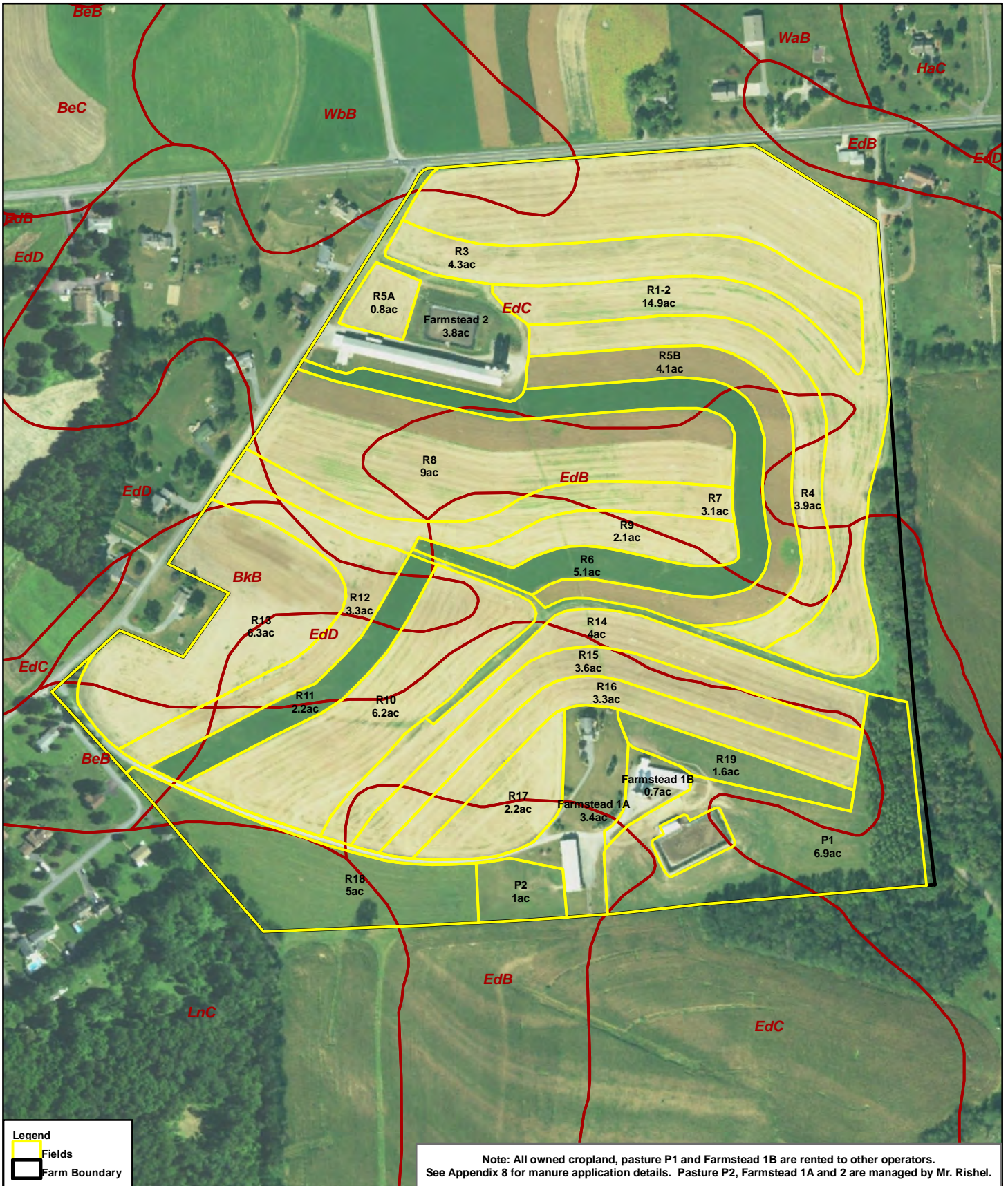
Operation Maps

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Topographic Map and Soils Map** must be included here. The Topographic map must be drawn to scale and identify the land included in the plan with operation boundaries. The Soils Map must include the field identification and boundaries, soil types and slopes with soil legend. Adding P Index lines can be helpful on the Topographic or Soils map but are not required. The Operator Management Map must be included in the Nutrient Management Plan Summary.

John Rishel Topographic Map



John Rishel Soils Map



Northumberland County Soils Legend

| | | | |
|------------|--|------------|---|
| AbB | ALBRIGHTS SILT LOAM, 3 TO 8 PERCENT SLOPES | Hv | HOLLY SILT LOAM |
| AnA | ALLENWOOD GRAVELLY SILT LOAM, 0 TO 3 PERCENT SLOPES | Hy | HOLLY SILT LOAM, PONDED |
| AnD | ALLENWOOD GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES | HZ | HOLLY SILT LOAM, RARELY FLOODED |
| AoB | ALLENWOOD AND WASHINGTON SOILS, 3 TO 8 PERCENT SLOPES | KmB | KREAMER CHERTY SILT LOAM, 3 TO 8 PERCENT SLOPES |
| AoC | ALLENWOOD AND WASHINGTON SOILS, 8 TO 15 PERCENT SLOPES | KmC | KREAMER CHERTY SILT LOAM, 8 TO 15 PERCENT SLOPES |
| ArA | ALVIRA SILT LOAM, 0 TO 3 PERCENT SLOPES | LaB | L Aidig GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES |
| ArB | ALVIRA SILT LOAM, 3 TO 8 PERCENT SLOPES | LaC | L Aidig GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES |
| ArC | ALVIRA SILT LOAM, 8 TO 15 PERCENT SLOPES | LbB | L Aidig EXTREMELY STONY LOAM, 0 TO 8 PERCENT SLOPES |
| AsB | ALVIRA VERY STONY SILT LOAM, 0 TO 8 PERCENT SLOPES | LdD | L Aidig AND MECKESVILLE EXTREMELY STONY SOILS, 8 TO 25 PERCENT SLOPES |
| Ba | BARBOUR SOILS, FREQUENTLY FLOODED | LdF | L Aidig AND MECKESVILLE EXTREMELY STONY SOILS, STEEP |
| Bb | BARBOUR-LINDEN COMPLEX, RARELY FLOODED | LkB | LAKIN LOAMY FINE SAND, 3 TO 8 PERCENT SLOPES |
| Bc | BASHER SOILS | LkC | LAKIN LOAMY FINE SAND, 8 TO 15 PERCENT SLOPES |
| Bd | BASHER SOILS, FREQUENTLY FLOODED | LnB | LECK KILL SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES |
| BeB | BEDINGTON SILT LOAM, 3 TO 8 PERCENT SLOPES | LnC | LECK KILL SHALY SILT LOAM, 8 TO 15 PERCENT SLOPES |
| BeC | BEDINGTON SILT LOAM, 8 TO 15 PERCENT SLOPES | LnD | LECK KILL SHALY SILT LOAM, 15 TO 25 PERCENT SLOPES |
| BeD | BEDINGTON SILT LOAM, 15 TO 25 PERCENT SLOPES | Lw | LINDEN SILT LOAM |
| BkB | BERKS SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES | MkB | MECKESVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES |
| BkC | BERKS SHALY SILT LOAM, 8 TO 15 PERCENT SLOPES | MkC | MECKESVILLE SILT LOAM, 8 TO 15 PERCENT SLOPES |
| BkD | BERKS SHALY SILT LOAM, 15 TO 25 PERCENT SLOPES | MkD | MECKESVILLE SILT LOAM, 15 TO 25 PERCENT SLOPES |
| BuB | BUCHANAN GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES | MoA | MONONGAHELA SILT LOAM, 0 TO 3 PERCENT SLOPES |
| BuC | BUCHANAN GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES | MoB | MONONGAHELA SILT LOAM, 3 TO 8 PERCENT SLOPES |
| BxB | BUCHANAN VERY STONY LOAM, 0 TO 8 PERCENT SLOPES | OpB | OPEQUON SILTY CLAY LOAM, 3 TO 8 PERCENT SLOPES |
| BxD | BUCHANAN VERY STONY LOAM, 8 TO 25 PERCENT SLOPES | OpD | OPEQUON SILTY CLAY LOAM, 8 TO 25 PERCENT SLOPES |
| CaB | CALVIN-KLINESVILLE SHALY SILT LOAMS, 3 TO 8 PERCENT SLOPES | OpE | OPEQUON SILTY CLAY LOAM, 25 TO 50 PERCENT SLOPES |
| CaC | CALVIN-KLINESVILLE SHALY SILT LOAMS, 8 TO 15 PERCENT SLOPES | Pa | PITS |
| CaD | CALVIN-KLINESVILLE SHALY SILT LOAMS, 15 TO 25 PERCENT SLOPES | Qu | QUARRIES |
| DAM | DAMS | RwB | RUSHTOWN VERY SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES |
| DeB | DEKALB EXTREMELY STONY SANDY LOAM, 0 TO 8 PERCENT SLOPES | RwC | RUSHTOWN VERY SHALY SILT LOAM, 8 TO 25 PERCENT SLOPES |
| DeD | DEKALB EXTREMELY STONY SANDY LOAM, 8 TO 25 PERCENT SLOPES | ShA | SHELMADINE SILT LOAM, 0 TO 3 PERCENT SLOPES |
| DeF | DEKALB EXTREMELY STONY SANDY LOAM, STEEP | ShB | SHELMADINE SILT LOAM, 3 TO 8 PERCENT SLOPES |
| Du | DUMPS, MINE | SmB | SHELMADINE VERY STONY SILT LOAM, 0 TO 8 PERCENT SLOPES |
| Dy | DYSTROCHREPTS, BOULDERY | Uf | UDIFLUVENTS, COAL OVERWASH |
| EdB | EDOM COMPLEX, 3 TO 8 PERCENT SLOPES | Ug | UDIFLUVENTS AND FLUVAQUENTS, GRAVELLY |
| EdC | EDOM COMPLEX, 8 TO 15 PERCENT SLOPES | Uh | UDORTHENTS, SANDSTONE AND SHALE |
| EdD | EDOM COMPLEX, 15 TO 25 PERCENT SLOPES | UnB | UNADILLA SILT LOAM, 3 TO 8 PERCENT SLOPES |
| EsB | ELLIBER CHERTY SILT LOAM, 3 TO 8 PERCENT SLOPES | UnC | UNADILLA SILT LOAM, 8 TO 15 PERCENT SLOPES |
| EsC | ELLIBER CHERTY SILT LOAM, 8 TO 15 PERCENT SLOPES | UnD | UNADILLA SILT LOAM, 15 TO 25 PERCENT SLOPES |
| EsD | ELLIBER CHERTY SILT LOAM, 15 TO 25 PERCENT SLOPES | Ur | URBAN LAND |
| EtB | ELLIBER VERY CHERTY SILT LOAM, 3 TO 8 PERCENT SLOPES | W | WATER |
| EtC | ELLIBER VERY CHERTY SILT LOAM, 8 TO 15 PERCENT SLOPES | WaB | WASHINGTON SILT LOAM, WET SUBSTRATUM, 3 TO 8 PERCENT SLOPES |
| EtD | ELLIBER VERY CHERTY SILT LOAM, 15 TO 25 PERCENT SLOPES | WbA | WATSON SILT LOAM, 0 TO 3 PERCENT SLOPES |
| EtF | ELLIBER VERY CHERTY SILT LOAM, 25 TO 70 PERCENT SLOPES | WbB | WATSON SILT LOAM, 3 TO 8 PERCENT SLOPES |
| EvB | EVENDALE CHERTY SILT LOAM, 3 TO 8 PERCENT SLOPES | WbC | WATSON SILT LOAM, 8 TO 15 PERCENT SLOPES |
| HaB | HAGERSTOWN SILT LOAM, 3 TO 8 PERCENT SLOPES | WeB | WEIKERT SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES |
| HaC | HAGERSTOWN SILT LOAM, 8 TO 15 PERCENT SLOPES | WeC | WEIKERT SHALY SILT LOAM, 8 TO 15 PERCENT SLOPES |
| HaD | HAGERSTOWN SILT LOAM, 15 TO 25 PERCENT SLOPES | WeD | WEIKERT SHALY SILT LOAM, 15 TO 25 PERCENT SLOPES |
| HtB | HARTLETON CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES | WkE | WEIKERT AND KLINESVILLE SHALY SILT LOAMS, STEEP |
| HtC | HARTLETON CHANNERY SILT LOAM, 8 TO 15 PERCENT | WsA | WHEELING SOILS, 0 TO 3 PERCENT SLOPES |
| HtD | HARTLETON CHANNERY SILT LOAM, 15 TO 25 PERCENT SLOPES | WsB | WHEELING SOILS, 3 TO 8 PERCENT SLOPES |
| HuB | HAZLETON AND CLYMER EXTREMELY STONY SANDY LOAMS, 0 TO 8 PERCENT SLOPES | WsC | WHEELING SOILS, 8 TO 15 PERCENT SLOPES |
| HuD | HAZLETON AND CLYMER EXTREMELY STONY SANDY LOAMS, 8 TO 25 PERCENT SLOPES | WyA | WYOMING GRAVELLY SANDY LOAM, 0 TO 3 PERCENT SLOPES |
| HuF | HAZLETON AND CLYMER EXTREMELY STONY SANDY LOAMS, 25 TO 80 PERCENT SLOPES | WyB | WYOMING GRAVELLY SANDY LOAM, 3 TO 8 PERCENT SLOPES |

Supporting Information & Documentation

Includes if applicable the Rainfall Additions Worksheet, Winter Application Matrix, Residual N Calculation Worksheet and other supplemental worksheets included in the NMP Spreadsheet. Attach information and documentation necessary to support plan content not included elsewhere in the NMP Spreadsheet or appendices. Examples include, but are not limited to, documentation of animal weights if Agronomy Facts 54 is not used, bedding calculations, or calculations for irrigation rates.

Growing Animal Weight Calculator

| Animal Type | Beginning Age | Ending Age | Calculated average weight based on production age range |
|--|---------------|------------|---|
| Dairy: Holstein/ Brown Swiss-Calf/Heifer 0-24 mo | 3 Months | 5 Months | 310.00 lbs. |
| Dairy: Holstein/ Brown Swiss-Calf/Heifer 0-24 mo | 5 Months | 8 Months | 448.00 lbs. |
| Dairy: Holstein/ Brown Swiss-Calf/Heifer 0-24 mo | 8 Months | 12 Months | 640.00 lbs. |
| Dairy: Holstein/ Brown Swiss-Calf/Heifer 0-24 mo | 12 Months | 17 Months | 854.00 lbs. |
| Dairy: Holstein/ Brown Swiss-Calf/Heifer 0-24 mo | 17 Months | 23 Months | 1083.00 lbs. |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Emergency Response Plan

If an emergency spill or leak should occur you need to take the following actions:

1) **Ensure that you and other people are safe. If the spill or leak involves a public road:**

- a. Contact the police for traffic control: *State Police - 911*
- b. Use flares, safety cones, etc. to warn approaching motorists

2) **Stop the leak or spill:**

- a. If the leak or spill occurs while emptying the storage:
 - i. Stop pumps, close valves and / or stop siphoning of manure
 - ii. Park on top of the flexible piping to pinch it closed
 - iii. If necessary, direct manure to another storage structure
 - iv. Plug holes in the impoundment, build dams to capture the leak and either pump the manure back into the storage or spread it on crop fields according to your nutrient management plan
- b. If the spill happens while on the road:
 - i. Pull off to the side of the road
 - ii. Plug the leak or otherwise stop the flow of manure from the tank
 - iii. Build a berm or dike to keep manure from flowing into streams, ditches, etc.
 - iv. Call the police for traffic control: *State Police – 911*

3) **Contain and control the leak or spill:**

- a. Build a containment dam to capture the manure using soil, gravel, hay bales, etc. Provide an area for the impounded manure to run into and be temporarily stored. Limit the area in contact with manure. Local individuals with excavation and manure hauling equipment are:
 - i. *Metzler Ag Service – 570-524-0205*
 - ii. *Gutelius Excavating – 570-966-3727*
- b. Prevent manure from running into streams, ditches, waterways, etc.
- c. Use absorbent materials such as straw, hay, sawdust, animal feed or soil to soak up the manure and to limit or stop manure flow.
- d. Check for contaminated subsurface tile lines and divert manure flow from inlet structures

4) **Notify the proper authorities:**

Pennsylvania Department of Environmental Protection Emergency Response – 570-327-3636
Northumberland County Conservation District – 570-495-4665
PA Fish & Boat Commission Southeast Regional Office – 814-359-5250
TeamAg, Inc. Nutrient Management Specialist – 570-764-7003

- a. Make a record of the details of the spill and the actions you took to remedy the situation. Take pictures of the extent of the spill as well as your containment and cleanup practices.
- b. If a spill enters a sinkhole or otherwise has the potential to enter groundwater, notify adjacent landowners who use private wells for their water supply.

5) **Clean up the leak or spill:**

- a. Clean up procedures may be directed by the authorities listed above.
- b. Pick up absorbent materials you used and properly dispose of the material.
- c. Restore damaged areas if necessary.





**COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION**

DATE: September 13, 2018

TO: Members
State Conservation Commission

FROM: Larry G Baum
State Conservation Commission

SUBJECT: Nutrient Management Plan Review
Orlin Martin, Northumberland County, Pennsylvania

Action Requested

Action on a Nutrient Management Plan for the following operation in Northumberland County:

Orlin Martin
215 Balliet Road
Muncy, PA 17756

Background

I have completed the required review of the subject nutrient management plan listed above. Final corrections to the plan were received at the State Conservation Commission September 13, 2018. As of that date, the plan was considered to be in its final form. The operation, located in Northumberland County, is considered to be a Concentrated Animal Operation (CAO) under the PA Nutrient and Odor Management Act (Act 38 of 2005). The Commission is the proper authority to take action on this plan, because Northumberland County Conservation District is not delegated plan review and action responsibilities under the Act 38 program.

A brief description of the operation, concluding the staff recommendation, is attached. Also attached is a copy of the complete nutrient management plan for the operation.

Thank you for considering this plan for Commission action.

Farm Descriptions

Orlin Martin NMP, Northumberland County – The Orlin Martin agricultural operation is a broiler operation with pleasure horses. The operation consists of a total of 15.79 acres of which 3.99 acres' pasture and 11.8 acres' headquarters. There are three broiler houses containing 30,000 birds each and three pleasure horses. Six flocks are finished per barn per year with each flock being housed for 6-7 weeks. All broiler manure is exported to a manure broker at time of cleanout. Also on the operation are a maximum of three pleasure horses on 3.99 acres of pasture with a run-in shed. The horses are fed and watered in the shed.

Broiler mortalities are composted on a corner of a concrete pad behind the middle broiler house. The small quantity of mortality compost (approximately 5 ton) is exported to a neighbor for application to cropland. At the current time the horse manure is cleaned from the shed by hand and applied to the pasture.

In the near future, a neighbor will apply both horse and poultry manure to the pasture to increase fertility. Phosphorous soil test levels are very low for the pasture.

There is no crop fields or crop acres on this operation.

The combined animal equivalent units on the Orlin Martin operation is 223.89. There are 3.99 crop production acres associated to the Orlin Martin operation. The animal equivalent units per acre for Orlin Martin operation are 56.11, classifying this operation as a concentrated animal operation under Act 38 of 2005.

The proposed NMP for Orlin Martin indicates no BMPs need to be implemented,

Based on my review, the NMP amendment developed for Orlin Martin, operation meets the requirements of the PA Nutrient and Odor Management Act and Regulations, and I therefore recommend Commission approval.

NON-FINAL FORM Nutrient Management Plan

Version 1

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP

8/22/2018
Month, Day and Year

For Crop Year(s)

2019-2021

Prepared For

Operator's Name, Mailing Address, Telephone Number(s)

Orlin Martin
215 Balliet Rd
Muncy, PA 17756
570-777-3704

Operation's Location Address (If different than above)

NON-FINAL FORM

Version 2

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP

9/10/2018
Month, Day and Year

FINAL FORM

This version of the plan will be considered for action by the Conservation District Board at their November 13, 2018 meeting

9/13/18
MONTH, DAY AND YEAR

Site Name (CAFOs)

Prepared By

Nutrient Management Specialist's Name, Address, Telephone Number(s)

Josh Keister
245 Walnut St. Milton PA 17847
570-898-1466

Nutrient Management Specialist's Program Certification Number

NMC 965

Administratively Complete Date

8/22/2018

Plan Approval Date

Plan Update Submission Date(s)

(updates to the approved plan not requiring board action)

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Appendix 4: Crop & Manure Management Information (Excel)

Appendix 5: Phosphorus Index (Excel)

Appendix 6: Manure Management (Word)

Appendix 7: Stormwater Control (Word)

Appendix 8: Importer/Broker Agreements & Nutrient Balance Sheets (Word & Excel)

Appendix 9: Operation Maps (Mapping Program)

Topographic Map

Soils Map

Appendix 10: Supporting Information & Documentation (Excel)

(List below the required documents included in the plan.)

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 4.0

Crop Year(s) 2019-2021

Whole Farm Note:

If manure runs out for any field, consult Appendix 4 of the plan for that field. The fertilizer required on any part of the field that does not receive manure can be determined from the 'Net Nutrients Required' for that field.

Operation Acres:

Total Acres: 15.79

Total Acres Available For Nutrient Application Under Operator's Control: Owned: 3.99

Rented: 0

Animal Equivalent Units: 223.89

Animal Equivalent Units Per Acre: 56.11

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | | |
|---------------|-------|--------------------------------------|----------------------|--------------------|--|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|--|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | |
| Horse Pasture | 3.99 | Established Pasture (without legume) | horses - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | See Notes | 0 | 0 | 0 | | | | | | | |
| Horse Pasture | 3.99 | Established Pasture (without legume) | Horses | Spring | Spring: Spring or summer utilization- incorporation after 7 days or none | 2 tons/A | 0 | 0 | 0 | | | | | | | |
| Horse Pasture | 3.99 | Established Pasture (without legume) | Broilers | Spring | Spring: Spring or summer utilization- incorporation after 7 days or none | 3 tons/A | 0 | 0 | 0 | 69 | 0 | 0 | 7 | 14 | -31 | |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NMP Summary Notes

Crop Years 2019-2021

| CMU/Field ID | Notes |
|---------------|---|
| Horse Pasture | three horses on pasture for 18 hours per day for 365 days per year. Feed and water is provided at the barn. |
| Horse Pasture | Either mortality compost or poultry litter will be applied to the pasture to meet nutrient requirements. |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Manure Spreader Calibration Notes

Crop Years 2019-2021

| Manure Application Rate | Manure Spreader Used | Spreader Settings | Tractor Used (if applicable) | Tractor Settings (speed, gear, rpm, plo, etc.) |
|-------------------------|----------------------|--|------------------------------|--|
| 2.33 Va | Application by hand | no manure is mechanically applied on the operation | | |
| 3 Va | to be determined | spreader will be calibrated | before use on the pasture | |
| | | | | |
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| | | | | |

Additional Nutrient Management Plan Requirements

Manure Management and Stormwater BMP Implementation Summary

| Best Management Practice | NRCS Practice Code ¹ | BMP Location | Implementation Season & Year |
|--------------------------|---------------------------------|--------------|------------------------------|
| None | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

¹ If applicable, enter USDA-NRCS Practice Code. For other non-technical BMPs, leave blank.

In-Field Manure Stacking Procedures

Manure must be applied to the field within 120 days of stacking or the stacks must be covered. Stacks must be implemented and maintained according to sound BMPs, addressing concerns such as soil type, soil slope, shape of the pile, setbacks, and rotation of piles.

No manure is stacked in the field on the operation.

Additional CAFO Requirements

In-field stacking criteria, winter storage requirements, and other issues identified by DEP's review of the nutrient management plan.

N/A

Proposed Manure Storage Description

Type, dimensions, volume, freeboard and location on map.

No storages are proposed on the operation

Description of Planned Alternative Manure Technology Practices

Type of practice, volume of manure addressed, and result of practice.

None at this time.

Exported Manure Summary

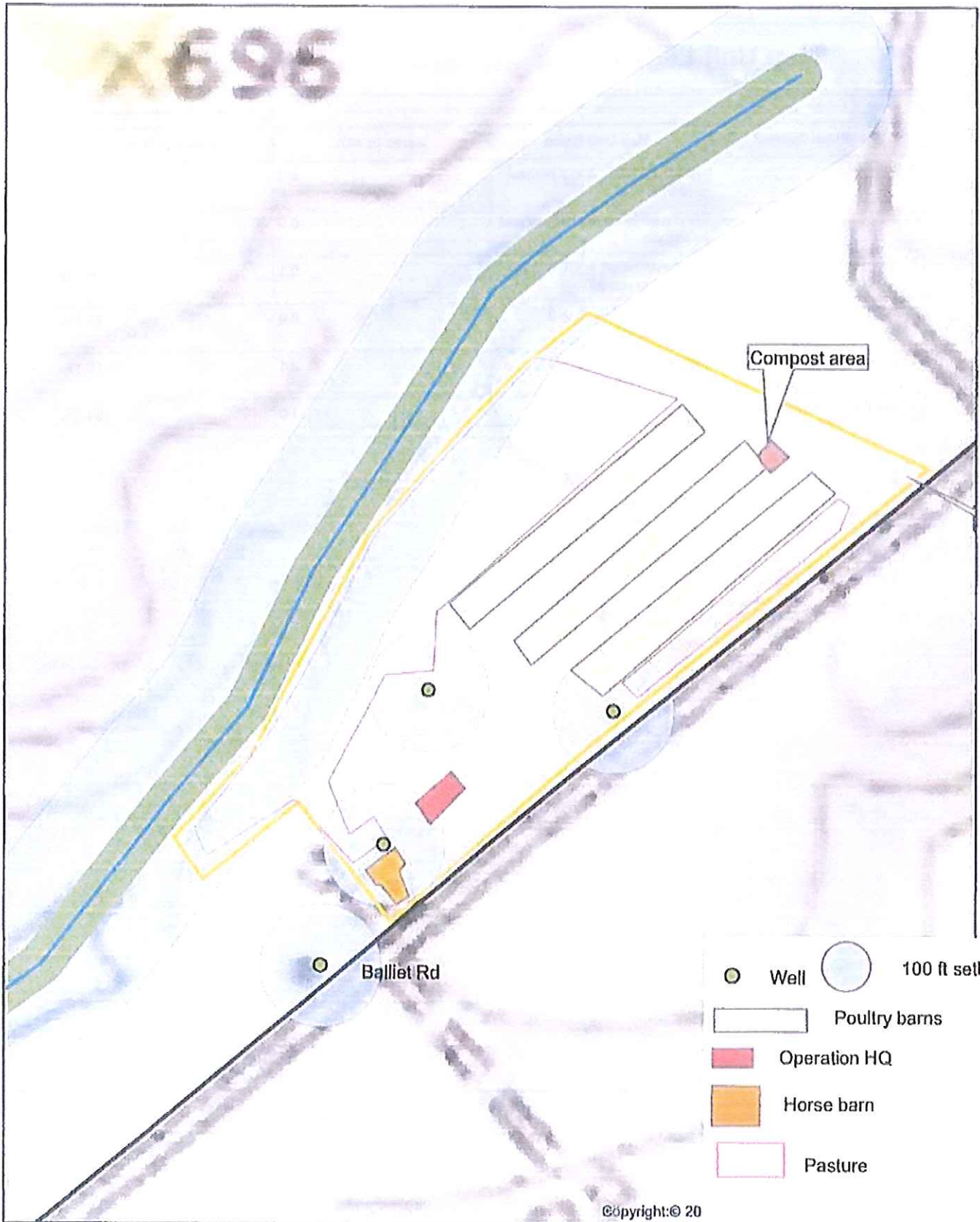
Summarize in a short paragraph the arrangements proposed for the manure to be exported from the operation. This information is described in more detail in Appendix 8 of this plan.

Poultry manure is exported to manure broker Kendall Martin at the time of cleanout. A neighbor receives a small quantity of the mortality compost (5 tons) for crop land application.

Operator Management Map

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The Operator Management Map is to be included here in the Nutrient Management Plan Summary and must include field identification, acreage and boundaries, manure application setback areas and buffers and associated landscape features (streams and other water bodies, sinkholes and active water wells), location of existing and proposed structural BMPs (including manure storage facilities), location of existing or proposed emergency manure stacking areas and in-field manure stacking areas, and road names adjacent to and within the operation. All features on the map must be clearly identified and include a legend for setback areas and other features. The Topographic Map and Soils Map must be included in Appendix 9.

Orlin Martin Operation



Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|------------------------------------|---|--------------|----------------|
| ArB | Alvira silt loam, 3 to 8 percent slopes | 0.9 | 7.2% |
| ArC | Alvira silt loam, 8 to 15 percent slopes | 0.0 | 0.1% |
| ShB | Shelmadine silt loam, 3 to 8 percent slopes | 0.1 | 0.5% |
| WbA | Watson silt loam, 0 to 3 percent slopes | 9.9 | 76.1% |
| WbB | Watson silt loam, 3 to 8 percent slopes | 2.1 | 16.1% |
| Totals for Area of Interest | | 13.0 | 100.0% |

MAP LEGEND

| | | | |
|--|------------------------|--|-----------------------|
| | Area of Interest (AOI) | | Soil Area |
| | Area of Interest (AOI) | | Stony Spot |
| | Soils | | Very Stony Spot |
| | Soil Map Unit Polygons | | Wet Spot |
| | Soil Map Unit Lines | | Other |
| | Soil Map Unit Points | | Special Line Features |
| | Special Point Features | | Water Features |
| | Blowout | | Streams and Canals |
| | Borrow Pit | | Transportation |
| | Clay Spot | | Rails |
| | Closed Depression | | Interstate Highways |
| | Gravel Pit | | US Routes |
| | Gravelly Spot | | Major Roads |
| | Landfill | | Local Roads |
| | Lava Flow | | Background |
| | Marsh or swamp | | Aerial Photography |
| | Mine or Quarry | | |
| | Miscellaneous Water | | |
| | Perennial Water | | |
| | Rock Outcrop | | |
| | Saline Spot | | |
| | Sandy Spot | | |
| | Severely Eroded Spot | | |
| | Sinkhole | | |
| | Slide or Slip | | |
| | Sodic Spot | | |

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

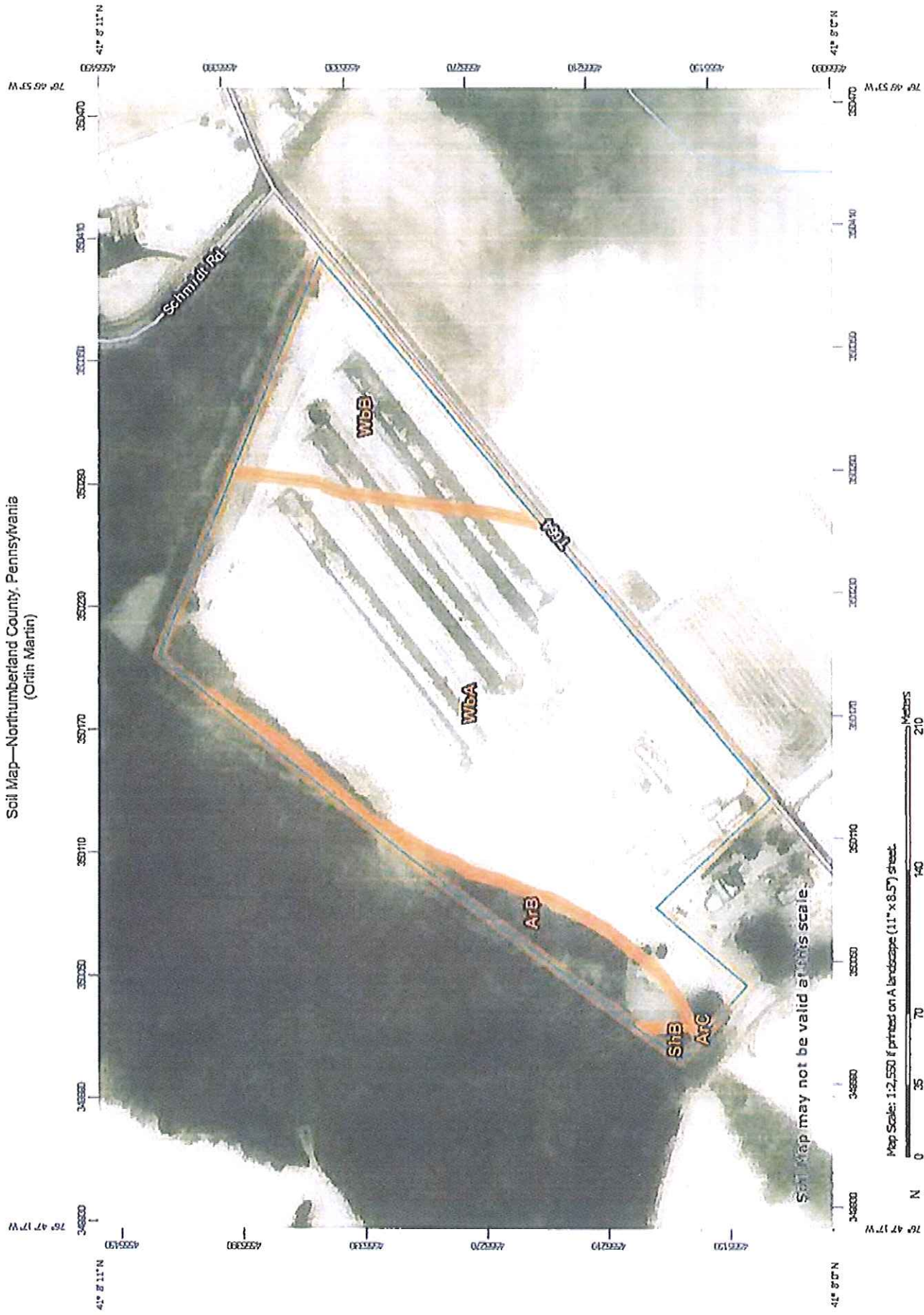
Soil Survey Area: Northumberland County, Pennsylvania
Survey Area Data: Version 10, Oct 4, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

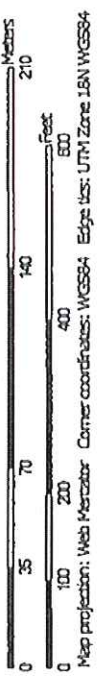
Date(s) aerial images were photographed: May 25, 2010—Nov 11, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Soil Map—Northumberland County, Pennsylvania
(Orlin Martin)



Map Scale: 1:2,550 if printed on A landscape (11" x 8.5") sheet.



Appendix 1

Nutrient Management Plan Agreement & Responsibilities

Plan Implementation Requirements

This nutrient management plan has been developed to meet the requirements of the following programs:

| | | | | | |
|-------------------------------------|---|-------------------------------------|-----|--------------------------|-----------------|
| <input checked="" type="checkbox"/> | Pennsylvania Act 38 of 2005 | <input checked="" type="checkbox"/> | CAO | <input type="checkbox"/> | VAO (check one) |
| <input type="checkbox"/> | Pennsylvania CAFO (Concentrated Animal Feeding Operation) program | | | | |
| <input type="checkbox"/> | Other program: _____ | | | | |

Plans developed under these programs are required to be implemented as approved in order to maintain compliance with the specific law or program. Implementation includes adherence to manure and fertilizer application rates, timing, setbacks and conditions; installation of listed BMPs within implementation timeframes; and record keeping obligations of the program.

The nutrient management plan has been developed as a: (check one)

| | | |
|-------------------------------------|----------------------------------|------------------------------------|
| <input type="checkbox"/> | 1-Year Plan for Crop Year _____ | (annual updates will be completed) |
| <input checked="" type="checkbox"/> | 3-Year Plan for Crop Years _____ | 2019-2021 |

Records required to be maintained include the following:

- 1) Annual crop yields
- 2) Manure and fertilizer application rates, locations and date of application
- 3) Manure production figures for the various manure groups listed in your plan
- 4) Soil test reports (testing required every 3 years per crop management unit)
- 5) Manure test reports (testing required once a year for each manure group)
- 6) Number of animals on pasture, number of days on pasture, and hours per day on pasture
- 7) For operations exporting manure, Manure Export Sheets
- 8) BMP designs and certification for new liquid and semi-solid manure storage facilities

The following has been confirmed:

| | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | Verification of Ag E&S Plan |
| <input checked="" type="checkbox"/> | Verification of Existing Site Specific Emergency Response Plan |

Verification that owners of rented/leased lands have been notified that a nutrient management plan has been developed which calls for manure to be applied to their lands and that they have no objections to the plan requirements.

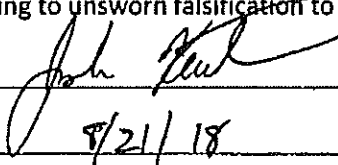
| | | | |
|--------------------------|-----------------|-------------------------------------|------------------------|
| <input type="checkbox"/> | Owners Notified | <input checked="" type="checkbox"/> | No Rented/Leased Lands |
|--------------------------|-----------------|-------------------------------------|------------------------|

Specialist Signature

I affirm that the information contained in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, based on information provided by the operator; that this plan has been developed in accordance with the criteria established for the program(s) indicated above; and that I have presented the final complete plan to the operator and discussed the content and implementation of this plan with the operator, subject to the penalties of 18 Pa.C.S.A. § 4904, relating to unsworn falsification to authorities.

Specialist Signature

Date



8/21/18

Operator Signature

I understand and agree that I will implement the practices, procedures and record keeping obligations as outlined in this plan in order to protect water quality and address the nutrient needs of the crops associated with the operation. I agree that if I use a commercial hauler or broker for the application or export of manure, that only haulers or brokers that hold a valid certification issued by the Pa Department of Agriculture, under Act 49 of 2004, will be used. I affirm that all information provided in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, and reflects the current and planned activities of the operation; and that, if this plan was completed by a nutrient management specialist, I have reviewed the final completed plan and the specialist has discussed the content and implementation of this plan with me, subject to the penalties of 18 Pa.C.S.A. § 4904, relating to unsworn falsification to authorities.

Operator Signature

Orlin M. [Signature]

Operator Title

Owner

Date

August 26, 2018

Appendix 2
Operation Information

Operation Description

Animal types and numbers; cropland, hayland and pastureland acreage; farmstead acreage; crop rotation (crops, sequence of crops, and number of years for each crop); manure group management, including atypical manure (contributing animal groups, collection, storage and handling procedures); mortality composting management.

Orlin Martin owns and operates a broiler operation in Muncy PA. The operation consists of three broiler finishing buildings containing 30,000 broilers apiece. Six flocks are finished per barn per year with each flock being in for 6-7 weeks. All manure from the birds is exported to a manure broker at the time of cleanout. Also on the operation are three pleasure horses on 3.99 acres of pasture. Manure from the horses is applied to the pasture as a solid. No other fields are present on the operation. A total of 15.79 acres is owned with 3.99 being permanent pasture and the remaining 11.8 acres being buildings and yard surrounding the house and barn.

Broiler mortalities are composted on the corner of a concrete pad located behind the middle broiler building. Compost is exported as needed. At the current time, horse manure is cleaned from the barn by hand and applied to the pasture by hand. In the near future a neighbor will apply both horse and poultry manure to the pasture to increase fertility. A small quantity of mortality compost (roughly 5 tons) is received by a neighbor for application to crop land.

County(s)

Northumberland

Name of Receiving Stream(s)/Watershed(s)

Unnamed tributary to Warrior Run

Notation of Special Protection Waters

None

Operation Acres

Total Acres: 15.79

Total Acres Available for Nutrient Application Under Operator's Control

Owned: 3.99

Rented: 0

Names & Addresses of Owners of Rented or Leased Land

N/a

Existing Manure Storages & Capacity

Type of storage, dimensions, useable capacity, freeboard, top or bottom loaded, dimensions and description of contributing runoff area, description of wastewater additions, types and amounts of bedding. Briefly describe, for each manure group, manure storage management during removal (degree of agitation, method of manure removal, extent the storage is emptied, type of unremoved manure, etc.) and manure sampling procedures.

Horse manure is collected in the barn when horses seek shelter. A small amount of bedding is utilized, mainly waste hay. Manure is removed as needed to keep area clean.

Manure Application Equipment Capacity & Practical Application Rates

Description of application equipment, practical application rates based on calibration and calibration method used, the data recorded during equipment calibration is to be retained on the farm. If applicable, name and Act 49 certification number of custom applicator.

At the time of plan submittal, the collected horse manure is applied to the pasture by hand due to low volume and the lack of a manure spreader. In the future, due to lack of nutrients present in the pasture a manure spreader will be rented and both poultry and horse manure applied to the pasture. Type of rental spreader is not known at this time.

| Appendix 3 Manure Group Information Crop Yrs. 2019-2021 | | Broilers | | Horses | |
|---|------------------------------|-------------------|--|----------------------------|--|
| Manure Report Date (note if averaging several reports) | August 17, 2018 | Book Value | | | |
| Laboratory Name | Penn State | Penn State | | | |
| Manure Type | Poultry | Other | | | |
| Manure Unit (lb/ton or 1000 gal) | lb/ton | lb/ton | | | |
| Total Nitrogen (N) (lb/ton or 1000 gal) | 38.40 | 12.00 | | | |
| Ammonium N (NH ₄ -N) (lb/ton or 1000 gal) | 11.18 | 0.00 | | | |
| Total Organic N (lb/ton or 1000 gal) | 28.24 | 12.00 | | | |
| Total Phosphate (P ₂ O ₅) (lb/ton or 1000 gal) | 27.71 | 5.00 | | | |
| Total Potash (K ₂ O) (lb/ton or 1000 gal) | 31.25 | 9.00 | | | |
| Percent Solids | 52.00 | 20.00 | | | |
| PSC Value (metaphical or book value) | 1.00 | 0.80 | | | |
| Percent Moisture | 48.00 | 80.00 | | | |
| Manure Group AEU's | 220.58 | 3.30 | | | |
| Description: Site & Season Applied | Manure generated by Broilers | Year long | | Manure generated by Horses | |
| Inventory Method | Records | Calculated | | Calculated | |
| Manure Group Identification | Collected Calc. | Uncollected Calc. | | Collected Calc. | |
| Manure Group | Broilers | Horses | | Horses - uncollected | |
| CALCULATED: Total Manure Collected Per Manure Group | | | | | |
| Units | | 9.3 Tons | | 24.8 Tons | |
| RECORDS: Total Manure Collected Per Manure Group | | | | | |
| Unit | 1,000.0 tons | | | | |
| Manure Used On-Farm | Collected 12.0 Tons | Uncollected 0.0 | | Collected 9.3 Tons | |
| Manure Exported | 1,000.0 tons | | | 0.0 tons | |
| Manure Allocation Balance | -12.0 Tons | 0.0 | | 0.0 Tons | |
| Manure Balance as a Percent of Total Manure Collected | -1.2% | | | -0.2% | |
| Total Rainfall and Runoff | 0 tons | | | 0 tons | |

| Appendix 3 Manure Group Information Crop Yrs. 2019-2021 | | Broilers | | Horses | |
|---|------------------------------------|---|------------------------------------|---|-----------|
| Animal Group † | Manure Generation per Animal Group | Uncollected Manure: Nutrient Analysis Book Values | Manure Generation per Animal Group | Uncollected Manure: Nutrient Analysis Book Values | |
| Animal Type | Broiler, Large: 0-63 days | | horses | horses - uncollected | |
| Animal Number | 90,000 | | Light Horse Haluro | Total Nitrogen (N) perhen | |
| Animal Weight | 3.55 | | 3 | 12.00 | |
| Animal Group AUs | 318.50 | | 1100 | Total Phosphate (P2O5) perhen | |
| Animal Group AEUs | 220.60 | | 3.30 | 5.00 | |
| Daily Manure Production per AU | 20.0 | | 55.0 | Total Potash (K2O) perhen | |
| Total Days Manure Produced | 252 | | 365 | PSC Value | |
| Total Manure Produced | | | 33 | 0.30 | |
| Days On Pasture | 0 | | 365 | | |
| Hours Per Day On Pasture | 0 | | 18 | | |
| Total Bedding | | | 1 | | |
| Total Washwater | | | 0 | | |
| CALCULATED - Total Uncollected Manure Per Animal Group | | | 24.8 | | |
| CALCULATED-Total Manure Collected Per Animal Group | | | 9 | | 25 - Tons |

| App. 4: Crop Yrs. 2018-2021 | | | | | | | | | | | |
|--|---|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|--|--|
| CHU/Field ID | Horse Pasture | | | Horse Pasture | | | Horse Pasture | | | | |
| Agres | 4.0 | | | 4.0 | | | 4.0 | | | | |
| Soil Test Report Date | August 10, 2018 | | | August 10, 2018 | | | August 10, 2018 | | | | |
| Laboratory Name | Spectrum Analytic | | | Spectrum Analytic | | | Spectrum Analytic | | | | |
| Soil Test Levels (NPK+P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | | |
| P Index Part A Evaluation | 8 | 44 | 5.8 | 8 | 44 | 5.8 | 8 | 44 | 5.8 | | |
| Part A Result | <150R | | | <150R | | | <150R | | | | |
| Crop | Part B | | | Part B | | | Part B | | | | |
| Planned Yield | Established Pasture (without legume) | | | Established Pasture (without legume) | | | Established Pasture (without legume) | | | | |
| PSU Soil Test Recommendation (lb/A) | 3 ton/A | | | 3 ton/A | | | 3 ton/A | | | | |
| User Soil Test Recommendation (lb/A) | N | P205 | K2O | N | P205 | K2O | N | P205 | K2O | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 150 | 140 | 140 | 150 | 140 | 140 | 150 | 140 | 140 | | |
| P Index Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | | |
| Net Nutrients Required (lb/A) | 115 | 140 | 140 | 100 | 109 | 84 | 94 | 97 | 83 | | |
| Manure Group | Horses - Unchicked | | | Horses | | | Broilers | | | | |
| Application Season: Management (proportion, cover crops, etc.) | Grazing animals with nutrient updates during growing season | | | Spring: Spring or summer utilization- incorporation after 7 days or none | | | Spring: Spring or summer utilization- incorporation after 7 days or none | | | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | | |
| P Index Application Method | 0.20 | | | 0.20 | | | 0.15 | | | | |
| N Balanced Manure Rate (ton: gal/A) | Nov - Mar: No Incorp or Incorp > 1 wk. 48 ton/A | | | April - Oct: No Incorp or Incorp > 1 wk. 42 ton/A | | | April - Oct: No Incorp or Incorp > 1 wk. 18 ton/A | | | | |
| P Removal Balance Manure Rate (ton or gal/A, if required by P Index) | Crop P Removal (lb/A) 45.0 9 ton/A | | | Crop P Removal (lb/A) 14.0 3 ton/A | | | Crop P Removal (lb/A) 2.5 0 ton/A | | | | |
| P Index Value | 55 | | | 55 | | | 55 | | | | |
| Planned Manure Rate (ton or gal/A) | 6.22 ton/A | | | 2.33 ton/A | | | 3 ton/A | | | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 15 | 31 | 56 | 6 | 12 | 21 | 18 | 33 | 64 | | |
| Nutrient Balance after Manure | 100 | 109 | 84 | 94 | 97 | 83 | 76 | 14 | -31 | | |
| Supplemental Fertilizer (lb/A) | 0 | 0 | 0 | 0 | 0 | 0 | 69 | 0 | 0 | | |
| P Index Application Method | Multiple Initial | | | Multiple | | | Multiple Final | | | | |
| Fertilizer Nutrient Balances (lb/A) | 25 tons | | | 9 tons | | | 12 tons | | | | |
| Manure Utilized on CHU | Multiple Initial | | | Multiple | | | Multiple Final | | | | |

Appendix 5 - P Index

Crop Yrs. 2019-2021

Part A: Screening Tool CMUField ID

Part B: Screening Tool CMUField ID

Part C: Screening Tool CMUField ID

Soil N. Wetness

Soil N. Wetness

Soil N. Wetness

| PART A: SCREENING TOOL | | PART B: SCREENING TOOL | | PART C: SCREENING TOOL | | CMUField ID | Horse Pasture |
|--|--|--|--|--|--|-------------|---------------|
| Is the CMU in a Special Protection watershed? | | Is the CMU in a Special Protection watershed? | | Is the answer to Yes to any of these questions, Part B must be used. | | | No |
| A significant farm management change as defined by Act 387 | | Is there a significant farm management change as defined by Act 387 | | | | | No |
| Soil Test Mehlich 3 P greater than 200 ppm P? | | Is the Soil Test Mehlich 3 P greater than 200 ppm P? (either soil test value in ppm P) | | | | | 8 |
| Contributing Distance from CMU to receiving water <150 ft.? | | Is the Contributing Distance from the CMU to receiving water less than 150 ft.? | | | | | Yes |
| Is winter manure application planned for this field? | | Is winter manure application planned for this field? | | | | | No |
| Run P Index, Part B, voluntariness? (No to all Part A questions.) | | Run P Index, Part B, voluntariness? (Answers are No to all Part A questions.) | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | 8 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | | 2 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | | | | | | 0, 0, 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | | | | | | | 0, 0, 0 |
| SUPPLEMENTAL P FERTILIZER | | | | | | | 0, 0, 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER | | | | | | | 0, 0, 0 |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | | 0 |
| MANURE P RATE | | | | | | | 31, 12, 83 |
| MANURE APPLICATION METHOD | | | | | | | 0, 0, 0, 0, 0 |
| P SOURCE COEFFICIENT ¹ | | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | 0, 0, 0, 1 |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | | 76 |
| Source Factor Sum | | | | | | | 78 |
| PART B: TRANSPORT FACTORS | | | | | | | 0, 0, 0 |
| EROSION | | | | | | | 0, 0, 0 |
| RUNOFF POTENTIAL | | Drainage Class is Excessively | | Drainage Class is Somewhat Excessively | | | 4 |
| SUBSURFACE DRAINAGE | | None | | Random | | | 0 |
| CONTRIBUTING DISTANCE | | 0 to 500 ft. | | 350 to 500 ft. | | | 5 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | | 10 |
| MODIFIED CONNECTIVITY | | 50 ft Riparian Buffer APPLIES TO DIST < 100 FT | | Grassed Wayside or None | | | 0, 0 |
| Transport Sum x Modified Connectivity / 24 | | | | | | | 0, 36 |
| P Index Value = 2 x Source x Transport | | | | | | | 65 |

1 OR easily permeable soil near to stream
 2 50 ft factor does not apply to fields receiving manure with a 35 ft buffer
 3 Enter 100 if there is a riparian or transitional area and there is no corresponding method factor or PSC; 2 will display as 0

Supporting Information & Documentation

Includes if applicable the Rainfall Additions Worksheet, Winter Application Matrix, Residual N Calculation Worksheet and other supplemental worksheets included in the NMP Spreadsheet. Attach information and documentation necessary to support plan content not included elsewhere in the NMP Spreadsheet or appendices. Examples include, but are not limited to, documentation of animal weights if Agronomy Facts 54 is not used, bedding calculations, or calculations for irrigation rates.

| Manure Analysis 5 Year Running Average | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Manure Average for Crop Years: 2018-2021 | Broilers | | | | | |
| | Average | 1 year ago | 2 years ago | 3 years ago | 4 years ago | 5 years ago |
| Manure Report Date | Aug 17 2018 | Aug 17 2018 | Aug 24 2017 | | | |
| Laboratory Name | Penn State | Penn State | Penn State | | | |
| Manure Type | Poultry | Poultry | Poultry | | | |
| Manure Unit (lb/ton or 1000 gal) | lb/ton | lb/ton | lb/ton | | | |
| Total Nitrogen (N) (lb/ton or 1000 gal) | 39.40 | 27.84 | 50.68 | | | |
| Ammonium N (NH ₄ -N) (lb/ton or 1000 gal) | 11.18 | 10.32 | 11.69 | | | |
| Total Organic N (lb/ton or 1000 gal) | 28.24 | 17.62 | 38.97 | | | |
| Total Phosphate (P ₂ O ₅) (lb/ton or 1000 gal) | 27.71 | 24.28 | 31.15 | | | |
| Total Potash (K ₂ O) (lb/ton or 1000 gal) | 31.29 | 28.37 | 38.21 | | | |
| Percent Solids | 52.00 | 40.70 | 63.00 | | | |
| PSC Value (Enter analytical or book value) | 1.00 | 1.00 | 1.00 | | | |

| Manure Average for Crop Years: 2018-2021 | Horses | | | | | |
|---|------------|------------|-------------|-------------|-------------|-------------|
| | Average | 1 year ago | 2 years ago | 3 years ago | 4 years ago | 5 years ago |
| Manure Report Date | Book Value | Book Value | | | | |
| Laboratory Name | Penn State | Penn State | | | | |
| Manure Type | Other | Other | | | | |
| Manure Unit (lb/ton or 1000 gal) | lb/ton | lb/ton | | | | |
| Total Nitrogen (N) (lb/ton or 1000 gal) | 12.00 | 12.00 | | | | |
| Ammonium N (NH ₄ -N) (lb/ton or 1000 gal) | | | | | | |
| Total Organic N (lb/ton or 1000 gal) | 12.00 | 12.00 | | | | |
| Total Phosphate (P ₂ O ₅) (lb/ton or 1000 gal) | 8.00 | 5.00 | | | | |
| Total Potash (K ₂ O) (lb/ton or 1000 gal) | 8.00 | 9.00 | | | | |
| Percent Solids | 20.00 | 20.00 | | | | |
| PSC Value (Enter analytical or book value) | 0.40 | 0.60 | | | | |

Appendix 6
Manure Management

Date of Site Evaluation: August 10, 2018

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated.

A site visit was conducted on August 10, 2018 to determine if there are any manure handling issues present. During the visit the areas around the broiler barns, the pasture and the main building area were looked at to determine if there are any handling issues present.

Identification of Inadequate Manure Management Practices and Conditions

List of each specific inadequate manure management practice or condition identified.

No issues were seen during the visit.

BMPs to Address Manure Management Problem Areas

List of specific BMPs (including PA Technical Guide standard name and number) and management changes that will be implemented to address each of the inadequate practices listed above.

None at this time.

Appendix 7
Stormwater Control

Date of Site Evaluation: August 10, 2018

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated.

A site visit was conducted on August 10, 2018 to determine if there are any erosion issues present on the operation. During the visit the farm lanes, building site and pasture were looked at to determine if bmps are needed on the operation.

Identification of Critical Runoff Problem Areas

List of each specific critical runoff problem area identified.

No issues were seen during the visit.

BMPs to Address Critical Runoff Problem Areas

List of BMPs (including PA Technical Guide standard name and number) and specific management changes that will be implemented to address each of the critical runoff problem areas listed above.

none.

Appendix 8
Importer/Broker Agreements & NBSs

Nutrient Balance Sheets are not required for importers that have an approved Nutrient Management Plan.

Exporter/Broker Agreement

Developed consistent with the PA Nutrient and Odor Management Act Program

- 1) This agreement is entered into on August 22 2018, by
Orlin Martin (the "exporter") who will supply manure, and
Kendall Martin (the "broker") who will receive the manure from the exporter.
- 2) The purpose of this agreement is to set forth the mutual responsibilities and understanding of the parties with respect to the export of manure from the exporter to the broker.
- 3) The exporter is located at (county, twp, and address): Northumberland, Lewis twp, 215
Ballet Rd Muscy PA 17256
- 4) The exporter will, as the supply of manure allows, provide the following amounts of manure during the seasons outlined below:

Tons or gallons (circle one) of manure, per season:
Spring 250 Summer 250 Fall 250 Winter 250
- 5) The broker's contact information is as follows:
 - a) Name: Kendall Martin
 - b) Address: 1516 North Hill Drive
Winfield, PA 17889
 - c) Telephone number: 570-452-2547
 - d) PDA Manure Broker Certification number: 1796 MB2
- 6) The Broker agrees to maintain their status as a certified Commercial Manure Broker as provided under Pa's Commercial Manure Hauler and Broker Certification Program (7 Pa Code Chapter 130e).
- 7) The Broker agrees to comply with all requirements established by section 5 of the Commercial Manure Hauler and Broker Certification Act regarding the development and distribution of nutrient balance sheets to importing operations and conservation districts when handling manure from a CAO, CAFO or volunteer operation.
- 8) The exporter will use a Manure Export Sheet to record all manure exported to the broker. These Manure Export Sheets are available from the county conservation district or the State Conservation Commission. Computer generated forms other than the manure export sheet may be used if they contain the same information as, and are reasonably similar in format to, the forms available from the State Conservation Commission or the conservation district.

9) This agreement shall remain in full effect unless terminated by either party upon thirty days prior written notice to the other party. If this agreement is terminated, the exporter shall notify the county conservation district office that approved their nutrient management plan, of the termination.

10) By signing this agreement, the broker accepts full responsibility for the manure received from the exporter as long as the manure is under the broker's control, including handling, storage and land application.

Exporter Signature, Name and Date

[Handwritten Signature] (signature)
Orlin Martin (name)
_____ (date)

Broker Signature, Name and Date

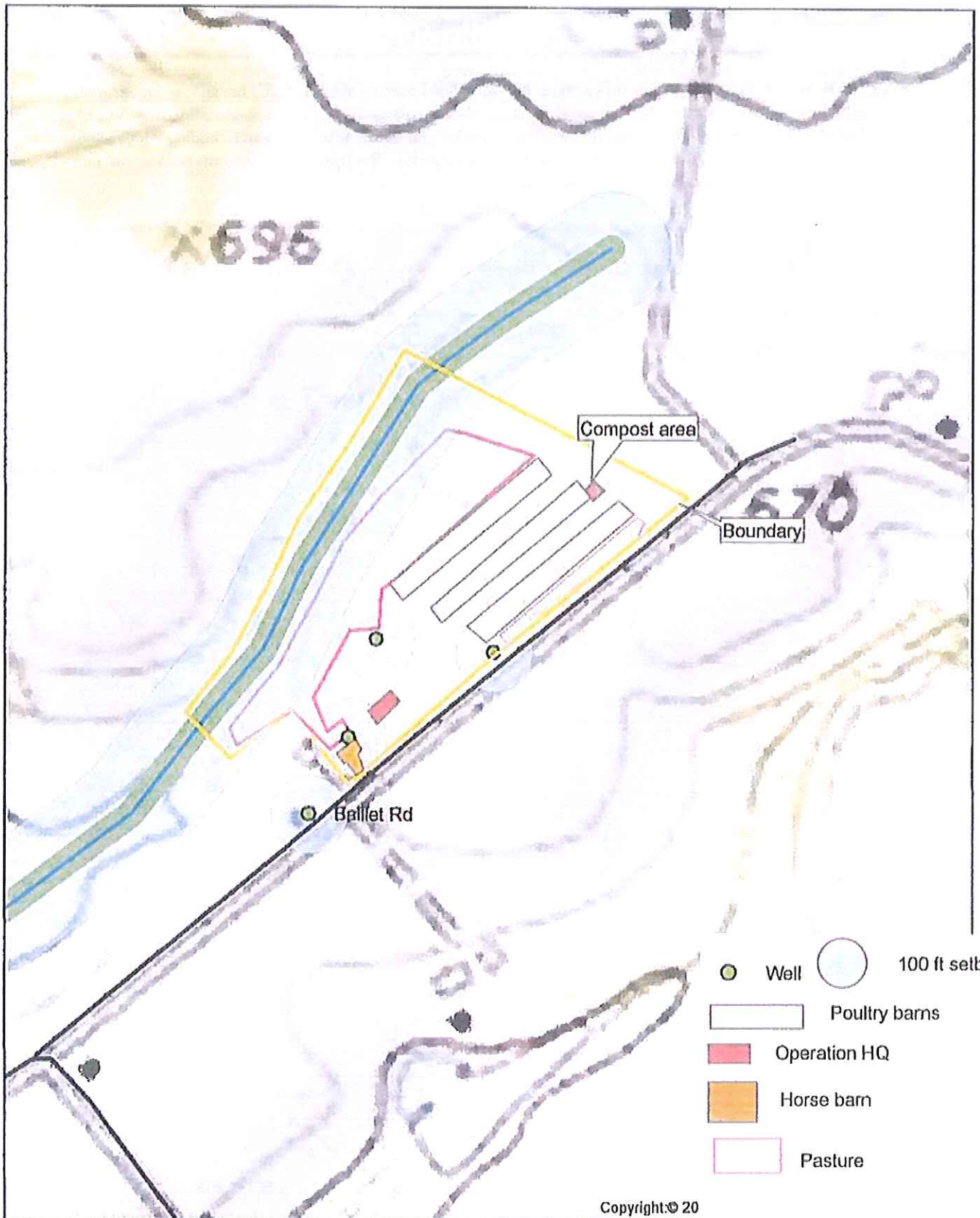
[Handwritten Signature] (signature)
Kendall Martin (name)
8/22/18 (date)

Appendix 9

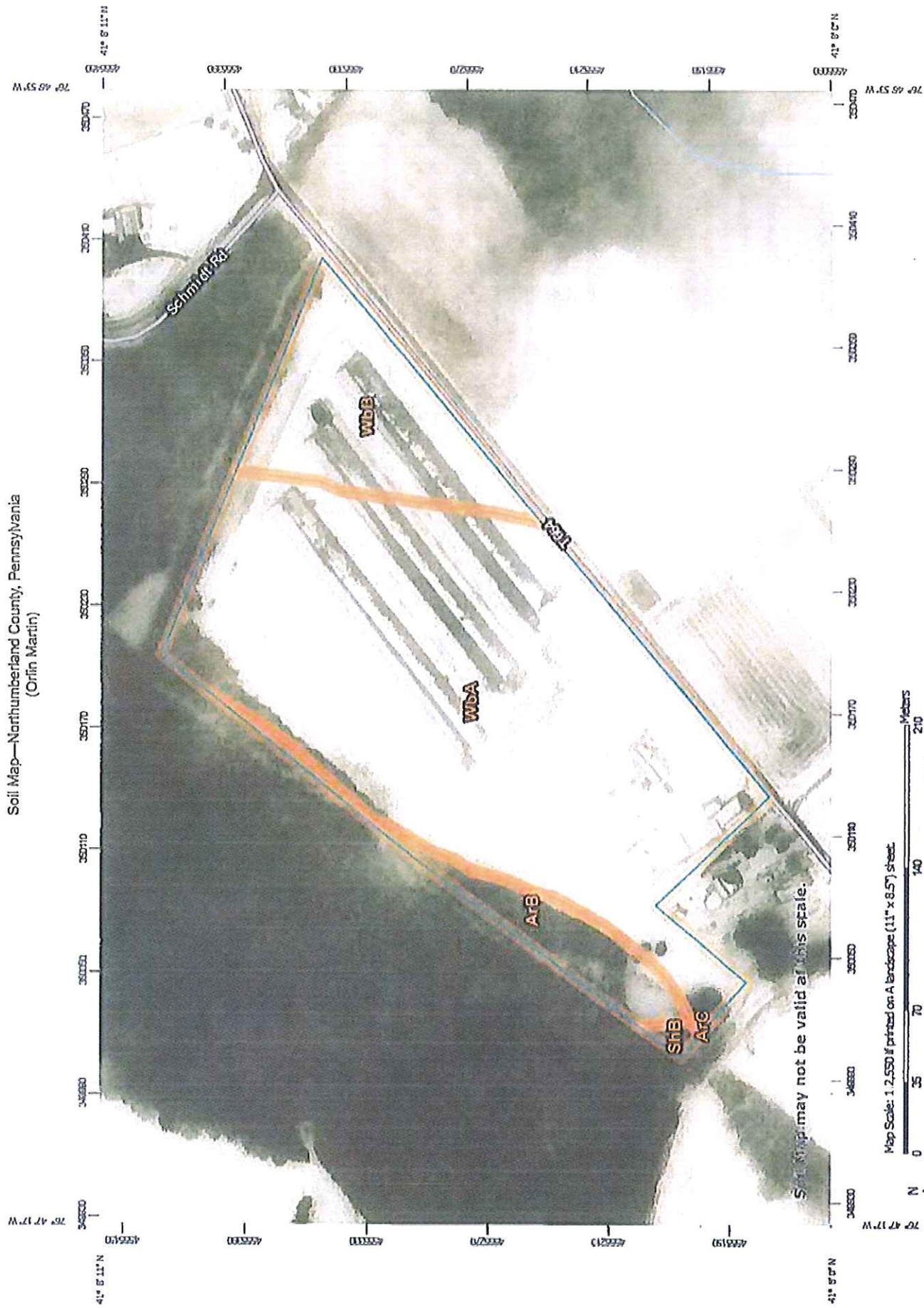
Operation Maps

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The Topographic Map and Soils Map must be included here. The Topographic map must be drawn to scale and identify the land included in the plan with operation boundaries. The Soils Map must include the field identification and boundaries, soil types and slopes with soil legend. Adding P Index lines can be helpful on the Topographic or Soils map but are not required. The Operator Management Map must be included in the Nutrient Management Plan Summary.

Orlin Martin Operation



Soil Map—Northumberland County, Pennsylvania
(Orlin Martin)



Soil Map may not be valid at this scale.

Map Scale: 1:2,550 if printed on A landscape (11" x 8.5") sheet.

Map projection: Web Mercator Corner coordinates: WGS84 Edge loc: UTM Zone 18N WGS84

MAP LEGEND

- Area of Interest (AOI)
 - Area of Interest (AOI)
- Soils
 - Soil Map Unit Polygons
 - Soil Map Unit Lines
 - Soil Map Unit Points
- Special Point Features
 - Blowout
 - Borrow Pit
 - Clay Spot
 - Closed Depression
 - Gravel Pit
 - Gravelly Spot
 - Landfill
 - Lava Flow
 - Marsh or swamp
 - Mine or Quarry
 - Miscellaneous Water
 - Potential Water
 - Rock Outcrop
 - Saline Spot
 - Sandy Spot
 - Severely Eroded Spot
 - Sinkhole
 - Slide or Slip
 - Sodic Spot
- Water Features
 - Streams and Canals
- Transportation
 - Rails
 - Interstate Highways
 - US Routes
 - Major Roads
 - Local Roads
- Background
 - Aerial Photography
- Soil Map Unit Features
 - Spot Area
 - Stony Spot
 - Very Stony Spot
 - Wet Spot
 - Other
- Special Line Features
 - Special Line Features

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Northumberland County, Pennsylvania
Survey Area Data: Version 10, Oct 4, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 25, 2010—Nov 11, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

| Manure Analysis 5 Year Running Average | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Manure Average for Crop Years: 2019-2021 | Broilers | | | | | |
| | Average | 1 year ago | 2 years ago | 3 years ago | 4 years ago | 5 years ago |
| Manure Report Date | Aug 17 2018 | Aug 17 2018 | Aug 24 2017 | | | |
| Laboratory Name | Penn State | Penn State | Penn State | | | |
| Manure Type | Poultry | Poultry | Poultry | | | |
| Manure Unit (lb/ton or 1000 gal) | lb/ton | lb/ton | lb/ton | | | |
| Total Nitrogen (N) (lb/ton or 1000 gal) | 39.69 | 27.64 | 50.69 | | | |
| Ammonium N (NH ₄ -N) (lb/ton or 1000 gal) | 11.16 | 10.32 | 11.69 | | | |
| Total Organic N (lb/ton or 1000 gal) | 28.24 | 17.62 | 38.67 | | | |
| Total Phosphate (P ₂ O ₅) (lb/ton or 1000 gal) | 27.71 | 24.26 | 31.15 | | | |
| Total Potash (K ₂ O) (lb/ton or 1000 gal) | 31.29 | 20.37 | 36.21 | | | |
| Percent Solids | 62.00 | 40.70 | 63.30 | | | |
| PSC Value (Enter analytical or book value) | 1.00 | 1.00 | 1.00 | | | |

| Manure Average for Crop Years: 2019-2021 | Horses | | | | | |
|---|------------|------------|-------------|-------------|-------------|-------------|
| | Average | 1 year ago | 2 years ago | 3 years ago | 4 years ago | 5 years ago |
| Manure Report Date | Book Value | Book Value | | | | |
| Laboratory Name | Penn State | Penn State | | | | |
| Manure Type | Other | Other | | | | |
| Manure Unit (lb/ton or 1000 gal) | lb/ton | lb/ton | | | | |
| Total Nitrogen (N) (lb/ton or 1000 gal) | 12.00 | 12.00 | | | | |
| Ammonium N (NH ₄ -N) (lb/ton or 1000 gal) | | | | | | |
| Total Organic N (lb/ton or 1000 gal) | 12.00 | 12.00 | | | | |
| Total Phosphate (P ₂ O ₅) (lb/ton or 1000 gal) | 6.69 | 9.00 | | | | |
| Total Potash (K ₂ O) (lb/ton or 1000 gal) | 9.00 | 9.00 | | | | |
| Percent Solids | 20.00 | 20.00 | | | | |
| PSC Value (Enter analytical or book value) | 0.60 | 0.60 | | | | |



**COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION**

DATE: October 12, 2018

TO: Members
State Conservation Commission

FROM: Larry G Baum
State Conservation Commission

SUBJECT: Nutrient Management Plan Review
Samuel Stoltzfus, Northumberland County, Pennsylvania

Action Requested

Action on a Nutrient Management Plan for the following operation in Northumberland County:

Samuel Stoltzfus
16221 SR 405
Watsonstown, PA 17777

Background

I have completed the required review of the subject nutrient management plan listed above. Final corrections to the plan were received at the State Conservation Commission October 12, 2018. As of that date, the plan was considered to be in its final form. The operation, located in Northumberland County, is considered to be a Concentrated Animal Operation (CAO) under the PA Nutrient and Odor Management Act (Act 38 of 2005). The Commission is the proper authority to take action on this plan, because Northumberland County Conservation District is not delegated plan review and action responsibilities under the Act 38 program.

A brief description of the operation, concluding the staff recommendation, is attached. Also attached is a copy of the complete nutrient management plan for the operation.

Thank you for considering this plan for Commission action.

.

Farm Descriptions

Samuel Stoltzfus NMP, Northumberland County – The Samuel Stoltzfus agricultural operation is a 300-head veal operation with two groups per year. The operation also includes: one Jersey milk cow, four driving horses, two miniature ponies, six female alpacas, two young alpacas, and one male alpaca. The operation consists of a total of 10.7 acres of which 0 acres of cropland, 4.8 acres of grazed hayland, 3.4 acres of pasture and 2.5 acres of farmstead.

The veal manure is handled as a liquid being collected in gutters inside the veal barn and transferred into the circular storage utilizing a pull plug system. The manure may be applied to the grazed hay field spring and fall with excess veal manure exported to Logan D Stoltzfus a new importer for the operation.

Alpacas are rotationally grazed on the hayland with excess grass being harvested for hay. The milk cow, horses and ponies are pastured on two pastures with the cow being on the pastures year-round and the horses on pasture from April to November. When not on pasture, the horses and ponies are confined in the horse barn with the collected manure handled as a solid and spread by hand on the garden or temporarily stacked north of the storage building on the farmstead. Mortalities are composted using a pile in pasture 3. Mortality compost is reused and not applied to fields, garden, nor exported. Horse manure is added to the compost pile as a carbon source.

The combined animal equivalent units on the Samuel Stoltzfus operation is 87.55. There are 8.2 acres available for manure application associated to the Samuel Stoltzfus operation. The animal equivalent units per acre for Samuel Stoltzfus operation are 10.68, classifying this operation as a concentrated animal operation under Act 38 of 2005.

The proposed NMP for Samuel Stoltzfus lists the following BMPs to be implemented,

- New fence (382) around manure storage Fall 2019.

Based on my review, the NMP amendment developed for Samuel Stoltzfus, operation meets the requirements of the PA Nutrient and Odor Management Act and Regulations, and I therefore recommend Commission approval.

NON-FINAL FORM

Version 1

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP

10/10/18
Month, Day and Year

Nutrient Management Plan

For Crop Year(s)

2019

2020

2021

Prepared For

Operator's Name, Mailing Address, Telephone Number(s)

Samuel Stoltzfus, 16221 SR405, Watsonstown, PA 17777, 570-538-9525

Operation's Location Address (if different than above)

Same

Site Name (CAFOs)

N/A

Prepared By

Nutrient Management Specialist's Name, Address, Telephone Number(s)

Todd C. Rush

TeamAg Inc.

120 Lake Street

Ephrata, PA 17522

570-764-7003

Nutrient Management Specialist's Program Certification Number

#988-NMC

Administratively Complete Date

October 10, 2018

Plan Approval Date

Plan Update Submission Date(s)

(updates to the approved plan not requiring board action)



NON-FINAL FORM

Version 2

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP

10/12/18
Month, Day and Year

FINAL FORM

This version of the plan will be considered for action by the Conservation District Board at their November 13, 2018 meeting

October 12, 2018
MONTH, DAY AND YEAR

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Nutrient Management Plan Summary

Total acres reported in NMP Summary: 8.2

Crop Year(s) 2019

Whole Farm Note:

Manure from the small quantity manure group will be applied by hand to the family garden.
 If manure runs out for any field, consult Appendix 4 of the plan for that field. The fertilizer required on any part of the field that does not receive manure can be determined from the 'Net Nutrients Required' for that field.

Operation Acres:

Total Acres: 10.7 Total Acres Available For Nutrient Application Under Operator's Control: Owned: 8.2 Rented: 0

Animal Equivalent Units: 87.55

Animal Equivalent Units Per Acre: 10.68

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | | |
|--------------|-------|---------------------------|----------------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|---|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | |
| 1 | 4.8 | Established Mixed Grasses | Femal Alpaca - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | | | | | | |
| 1 | 4.8 | Established Mixed Grasses | Young Alpaca - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | | | | | | |
| 1 | 4.8 | Established Mixed Grasses | Male Alpaca - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | | | | | | |
| 1 | 4.8 | Established Mixed Grasses | Veal Manure Fall | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 5000 gal/A | | 0 | 0 | 0 | | | | | | |
| 1 | 4.8 | Established Mixed Grasses | Veal Manure Spring | Spring | Spring: Spring or summer utilization- Incorporation after 7 days or none | 5000 gal/A | | 0 | 0 | 0 | 111 | 0 | 12 | 0 | -556 | 0 |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------|-------|--------------------------------------|------------------------------|--------------------|--|----------------------------------|-----------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| 2 | 1.5 | Established Pasture (without legume) | Milk Cow - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | | | | | | |
| 2 | 1.5 | Established Pasture (without legume) | Driving Horse - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | | | | | | |
| 2 | 1.5 | Established Pasture (without legume) | Miniature Pony - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | 53 | 0 | 0 | 0 | -77 | -44 |
| 3 | 1.9 | Established Pasture (without legume) | Milk Cow - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | | | | | | |
| 3 | 1.9 | Established Pasture (without legume) | Driving Horse - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | | | | | | |
| 3 | 1.9 | Established Pasture (without legume) | Miniature Pony - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | 53 | 0 | 0 | 0 | -77 | -44 |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NMP Summary Notes

Crop Years 2019

| CMU/Field ID | Notes |
|--------------|---|
| 1 | |
| 1 | |
| 1 | |
| 1 | |
| 1 | This field is managed as grazed hay. An average of 6 female alpacas, 2 young alpacas and 1 male a/paca are kept in the field for 24 hours per day year round or equivalent time. Small paddocks made from temporary fence are rotated through the field during the year. Water and supplemental feed are provided in the field. |
| 2 | |
| 2 | |
| 2 | This field is managed as permanent pasture. An average 1 milk cow is kept in the field for 24 hours per day year round or equivalent time. An average of 4 driving horses and 2 miniature ponies are kept in this field for 24 hours per day from April through November or equivalent time. Water and supplemental feed are provided in the pasture. Supplemental feed is also provided at the horse barn. |
| 3 | |
| 3 | |
| 3 | This field is managed as permanent pasture. An average 1 milk cow is kept in the field for 24 hours per day year round or equivalent time. An average of 4 driving horses and 2 miniature ponies are kept in this field for 24 hours per day from April through November or equivalent time. Water and supplemental feed are provided in the pasture. Supplemental feed is also provided at the horse barn. |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Manure Spreader Calibration Notes

1

Crop Years 2019

| Manure Application Rate | Manure Spreader Used | Spreader Settings | Tractor Used (if applicable) | Tractor Settings (speed, gear, rpm, pto, etc.) |
|-------------------------|----------------------------|-------------------|------------------------------|--|
| 5,000 gallons per acre | Irrigation Gun | N/A | Honda Pump | 5" pumped from storage using Honda pump equals 5,000 gallons per acre (1" = 1,000 gallons) |
| 5,000 gallons per acre | Commercial Applicator Used | N/A | N/A | N/A |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 8.2 Crop Year(s) 2020

Whole Farm Note: Manure from the small quantity manure group will be applied by hand to the family garden.
 If manure runs out for any field, consult Appendix 4 of the plan for that field. The fertilizer required on any part of the field that does not receive manure can be determined from the 'Net Nutrients Required' for that field.

Operation Acres:
 Total Acres: 10.7 Total Acres Available For Nutrient Application Under Operator's Control: Owned: 8.2 Rented: 0

Animal Equivalent Units: 87.55 Animal Equivalent Units Per Acre: 10.68

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------|-------|---------------------------|----------------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| 1 | 4.8 | Established Mixed Grasses | Femal Alpaca Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing See Notes | 0 | 0 | 0 | | | | | | |
| 1 | 4.8 | Established Mixed Grasses | Young Alpaca - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing See Notes | 0 | 0 | 0 | | | | | | |
| 1 | 4.8 | Established Mixed Grasses | Male Alpaca - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing See Notes | 0 | 0 | 0 | | | | | | |
| 1 | 4.8 | Established Mixed Grasses | Veal Manure Fall | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 5000 gal/A | 0 | 0 | 0 | | | | | | |
| 1 | 4.8 | Established Mixed Grasses | Veal Manure Spring | Spring | Spring: Spring or summer utilization- Incorporation after 7 days or none | 5000 gal/A | 0 | 0 | 0 | 111 | 0 | 12 | 0 | -556 | 0 |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------|-------|--------------------------------------|------------------------------|--------------------|--|----------------------------------|-----------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
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| 2 | 1.5 | Established Pasture (without legume) | Milk Cow - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | | | | | | |
| 2 | 1.5 | Established Pasture (without legume) | Driving Horse Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | | | | | | |
| 2 | 1.5 | Established Pasture (without legume) | Miniature Pony - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | 53 | 0 | 0 | 0 | -77 | -44 |
| 3 | 1.9 | Established Pasture (without legume) | Milk Cow - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing | See Notes | 0 | 0 | 0 | | | | | | |
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NMP Summary Notes

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Manure Spreader Calibration Notes

1

Crop Years 2020

| Manure Application Rate | Manure Spreader Used | Spreader Settings | Tractor Used (if applicable) | Tractor Settings (speed, gear, rpm, pto, etc.) |
|-------------------------|----------------------------|-------------------|------------------------------|--|
| 5,000 gallons per acre | Irrigation Gun | N/A | Honda Pump | 5" pumped from storage using Honda pump equals 5,000 gallons per acre (1" = 1,000 gallons) |
| 5,000 gallons per acre | Commercial Applicator Used | N/A | N/A | N/A |
| | | | | |
| | | | | |
| | | | | |

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 8.2 Crop Year(s) 2021

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| 1 | 4.8 | Established Mixed Grasses | Veal Manure Fall | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 5000 gaVA | | 0 | 0 | 0 | | | | | | |
| 1 | 4.8 | Established Mixed Grasses | Veal Manure Spring | Spring | Spring: Spring or summer utilization- Incorporation after 7 days or none | 5000 gaVA | | 0 | 0 | 0 | 111 | 0 | 12 | 0 | -556 | 0 |

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NMP Summary Notes

Crop Years 2021

| CMU/Field ID | Notes |
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Manure Spreader Calibration Notes

1

Crop Years 2021

| Manure Application Rate | Manure Spreader Used | Spreader Settings | Tractor Used (if applicable) | Tractor Settings (speed, gear, rpm, pto, etc.) |
|-------------------------|----------------------------|-------------------|------------------------------|--|
| 5,000 gallons per acre | Irrigation Gun | N/A | Honda Pump | 5" pumped from storage using Honda pump equals 5,000 gallons per acre (1" = 1,000 gallons) |
| 5,000 gallons per acre | Commercial Applicator Used | N/A | N/A | N/A |
| | | | | |
| | | | | |
| | | | | |

Additional Nutrient Management Plan Requirements

Manure Management and Stormwater BMP Implementation Summary

| Best Management Practice | NRCS Practice Code ¹ | BMP Location | Implementation Season & Year |
|--------------------------|---------------------------------|------------------------------|------------------------------|
| Fence | 382 | Concrete manure storage tank | Fall / 2019 |

¹ If applicable, enter USDA-NRCS Practice Code. For other non-technical BMPs, leave blank.

In-Field Manure Stacking Procedures

Manure must be applied to the field within 120 days of stacking or the stacks must be covered. Stacks must be implemented and maintained according to sound BMPs, addressing concerns such as soil type, soil slope, shape of the pile, setbacks, and rotation of piles.

This operation does not field stack manure.

Additional CAFO Requirements

In-field stacking criteria, winter storage requirements, and other issues identified by DEP's review of the nutrient management plan.

This operation is not a CAFO.

Proposed Manure Storage Description

Type, dimensions, volume, freeboard and location on map.

There are no manure storages proposed for this operation.

Description of Planned Alternative Manure Technology Practices

Type of practice, volume of manure addressed, and result of practice.

There are no alternative manure technology practices planned for this operation.

Exported Manure Summary

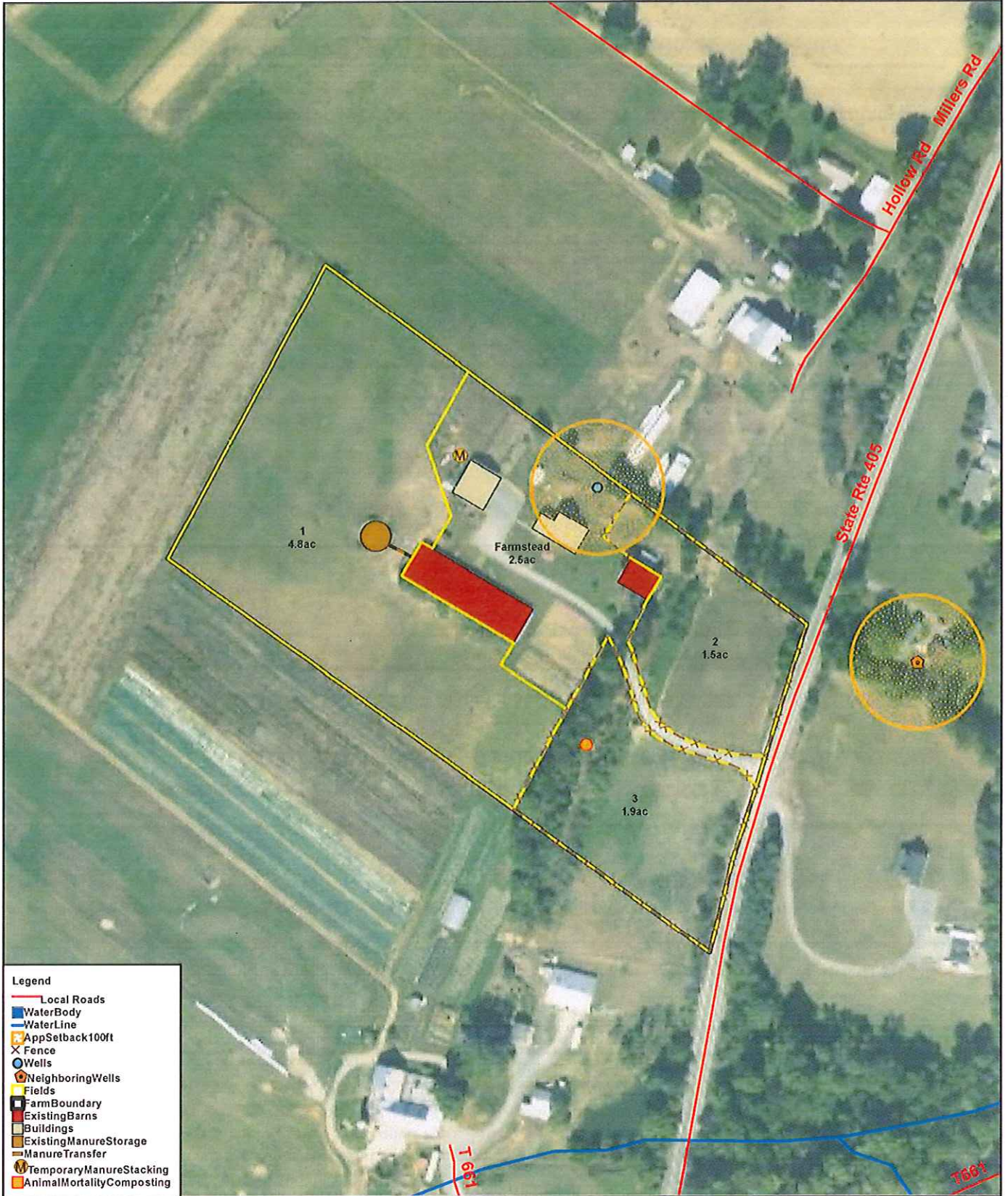
Summarize in a short paragraph the arrangements proposed for the manure to be exported from the operation. This information is described in more detail in Appendix 8 of this plan.

Excess veal manure is exported to known manure importers for application on cropland.

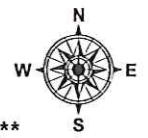
Operator Management Map

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Operator Management Map** is to be included here in the Nutrient Management Plan Summary and must include field identification, acreage and boundaries, manure application setback areas and buffers and associated landscape features (streams and other water bodies, sinkholes and active water wells), location of existing and proposed structural BMPs (including manure storage facilities), location of existing or proposed emergency manure stacking areas and in-field manure stacking areas, and road names adjacent to and within the operation. All features on the map must be clearly identified and include a legend for setback areas and other features. The Topographic Map and Soils Map must be included in Appendix 9.

Samuel Stoltzfus Operator Management Map



- Legend**
- Local Roads
 - WaterBody
 - WaterLine
 - AppSetback100ft
 - Fence
 - Wells
 - NeighboringWells
 - Fields
 - FarmBoundary
 - ExistingBarns
 - Buildings
 - ExistingManureStorage
 - ManureTransfer
 - TemporaryManureStacking
 - AnimalMortalityComposting



****Field verification of application setbacks and buffers is required prior to land application of manure.****

Appendix 1

Nutrient Management Plan Agreement & Responsibilities

Plan Implementation Requirements

This nutrient management plan has been developed to meet the requirements of the following programs:

Form with checkboxes for Pennsylvania Act 38 of 2005, CAO, VAO, Pennsylvania CAFO, and Other program.

Plans developed under these programs are required to be implemented as approved in order to maintain compliance with the specific law or program.

The nutrient management plan has been developed as a: (check one)

Form with checkboxes for 1-Year Plan for Crop Year and 3-Year Plan for Crop Years.

Records required to be maintained include the following:

- 1) Annual crop yields
2) Manure and fertilizer application rates, locations and date of application
3) Manure production figures for the various manure groups listed in your plan
4) Soil test reports (testing required every 3 years per crop management unit)
5) Manure test reports (testing required once a year for each manure group)
6) Number of animals on pasture, number of days on pasture, and hours per day on pasture
7) For operations exporting manure, Manure Export Sheets
8) BMP designs and certification for new liquid and semi-solid manure storage facilities

The following has been confirmed:

Form with checkboxes for Verification of Ag E&S Plan and Verification of Existing Site Specific Emergency Response Plan.

Verification that owners of rented/leased lands have been notified that a nutrient management plan has been developed which calls for manure to be applied to their lands and that they have no objections to the plan requirements.

Form with checkboxes for Owners Notified and No Rented/Leased Lands.

Specialist Signature

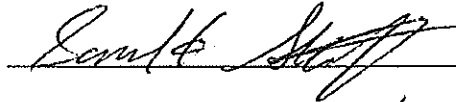
I affirm that the information contained in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, based on information provided by the operator; that this plan has been developed in accordance with the criteria established for the program(s) indicated above; and that I have presented the final complete plan to the operator and discussed the content and implementation of this plan with the operator, subject to the penalties of 18 Pa.C.S.A. § 4904, relating to unsworn falsification to authorities.

Specialist Signature and Date fields with handwritten signature and date 09/27/18.

Operator Signature

I understand and agree that I will implement the practices, procedures and record keeping obligations as outlined in this plan in order to protect water quality and address the nutrient needs of the crops associated with the operation. I agree that if I use a commercial hauler or broker for the application or export of manure, that only haulers or brokers that hold a valid certification issued by the Pa Department of Agriculture, under Act 49 of 2004, will be used. I affirm that all information provided in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, and reflects the current and planned activities of the operation; and that, if this plan was completed by a nutrient management specialist, I have reviewed the final completed plan and the specialist has discussed the content and implementation of this plan with me, subject to the penalties of 18 Pa.C.S.A. § 4904, relating to unsworn falsification to authorities.

Operator Signature



Operator Title

owner operator

Date

10-10-18

Appendix 2

Operation Information

Operation Description

Animal types and numbers; cropland, hayland and pastureland acreage; farmstead acreage; crop rotation (crops, sequence of crops, and number of years for each crop); manure group management, including atypical manure (contributing animal groups, collection, storage and handling procedures); mortality composting management.

Samuel Stoltzfus operates a veal raising farm in Northumberland County, PA. The operation consists of a total of 0 acres of cropland, 4.8 acres of hayland, 3.4 acres of pasture and 2.5 acres of farmstead. The current crop rotation used on the operation is permanent mixed grass hay. No tillage occurs on the operation at this time. The livestock operation consists of an average of 300 veal calves, 1 jersey milk cow, 4 driving horses, 2 miniature ponies, 6 adult female alpacas, 2 young alpacas and 1 adult male alpaca. Veal calves are 100% confined to the veal barn. Collected veal manure is handled as a liquid and stored in a circular concrete manure storage tank northwest of the veal barn. Veal manure is applied to mixed grass hay in the fall and spring. Excess veal manure is exported to known manure importers in the fall and spring. Alpacas are rotationally grazed through hay field 1 year round using temporary fence to make paddocks in the field. The milk cow is kept on pastures 2 and 3 year round. Horses and miniature ponies are kept on pastures 2 and 3 from April through November. Horses and miniature ponies are housed in the horse barn when not kept on pasture. These animals are considered a small quantity manure group in this plan. Collected horse and pony manure is handled as a solid and spread by hand on the family garden at the farmstead or added to the mortality compost pile as a carbon source for composting. Collected horse and pony manure may also be temporarily stacked north of the storage building at the farmstead until it is spread on the garden. Mortalities are composted using a compost pile in pasture 3. Mortality compost is reused as a composting base and is not applied to crop fields, the garden or exported off of the operation.

County(s)

Northumberland County / Delaware Township

Name of Receiving Stream(s)/Watershed(s)

Unnamed Tributary to the West Branch of the Susquehanna River – WWF

Notation of Special Protection Waters

None

Operation Acres

Total Acres: 10.7 acres

Total Acres Available for Nutrient Application Under Operator's Control

Owned: 8.2 acre

Rented: 0 acres

Names & Addresses of Owners of Rented or Leased Land

None

Existing Manure Storages & Capacity

Type of storage, dimensions, useable capacity, freeboard, top or bottom loaded, dimensions and description of contributing runoff area, description of wastewater additions, types and amounts of bedding. Briefly describe, for each manure group, manure storage management during removal (degree of agitation, method of manure removal, extent the storage is emptied, type of unremoved manure, etc.) and manure sampling procedures.

A 45' x 8' circular concrete manure storage tank is located northwest of the veal barn. The usable capacity of this storage is 83,728 gallons when accounting for a 6" free board, the volume of a 25 year / 24 hour storm event. This storage is bottom loaded by a gravity pipe. Manure is transferred to the storage using a pull-plug gutter system. There are a total of 8 - 1' x 75' x 1.25' deep (gutters slope from 0" to 30") gutters with pull-plugs. The storage volume of each gutter is 701.25 gallons and the total storage of all 8 gutters is 5,610 gallons. No runoff water or bedding is added to the storage. Veal barn wash water is added to the storage with veal manure. The storage is constantly agitated during manure removal. The majority of manure is removed from the storage when it is emptied, however a small amount of solids remain in the bottom of the storage. A representative manure sample is taken when the storages are emptied.

Manure Application Equipment Capacity & Practical Application Rates

Description of application equipment, practical application rates based on calibration and calibration method used, the data recorded during equipment calibration is to be retained on the farm. If applicable, name and Act 49 certification number of custom applicator.

The operation uses an irrigation gun to apply liquid veal manure. The irrigation gun is attached to a riser stand and is moved through out the field by hand. The manure is pumped directly from the concrete manure storage tank to the irrigation gun using a Honda pump. One inch of liquid stored in the concrete manure storage tank is equal to approximately 1,000 gallons. By pumping 5 inches of manure from the concrete manure storage tank, 5,000 gallons of manure is applied. The operation also uses a custom manure applicator to apply liquid veal manure. Menno Reiff 648-MH3, 117 Roush Road, Mifflinburg, PA 17844, 570-966-4349. The custom manure applicator's equipment has been calibrated to apply manure at the rates listed in this plan. Collected small quantity manure group manure is spread by hand.

| Appendix 3 Manure Group Information Crop Yrs. 2019 | Veal Manure Fall | | Veal Manure Spring | | Milk Cow | | Small Quantity Manure Group | | Alpaca | |
|---|--|-------------------|-------------------------|-------------------|------------------------------------|-------------------|---|-------------------|------------------------------------|-------------------|
| Manure Report Date (note if averaging several reports) | October 1, 2018 | | October 1, 2018 | | Book Value | | Book Value | | Book Value | |
| Laboratory Name | Spectrum Analytic, Inc. | | Spectrum Analytic, Inc. | | Penn State Agronomy Guide | | Penn State Agronomy Guide | | State Conservation Commission | |
| Manure Type | Other | | Other | | Dairy | | Other | | Other | |
| Manure Unit (lb/ton or 1000 gal) | lb/1000 gal | | lb/1000 gal | | lb/ton | | lb/ton | | lb/ton | |
| Total Nitrogen (N) (lb/ton or 1000 gal) | 24.03 | | 24.03 | | 10.00 | | 12.00 | | 20.00 | |
| Ammonium N (NH ₄ -N) (lb/ton or 1000 gal) | 16.60 | | 16.60 | | Complete NH ₄ -N | | Complete NH ₄ -N | | Complete NH ₄ -N | |
| Total Organic N (lb/ton or 1000 gal) | 7.48 Go to NMP Index | | 7.48 | | Check N values in Manure Avg Input | | Check N values in Manure Avg Input | | Check N values in Manure Avg Input | |
| Total Phosphate (P ₂ O ₅) (lb/ton or 1000 gal) | 54.97 Go to Appendix 3 Input | | 54.97 | | 4.00 | | 5.00 | | 3.90 | |
| Total Potash (K ₂ O) (lb/ton or 1000 gal) | 16.87 Go to Manure Avg Input | | 16.87 | | 8.00 | | 9.00 | | 20.80 | |
| Percent Solids | 4.17 Grassco Calculator | | 4.17 | | 12.00 | | 20.00 | | 65.00 | |
| PSC Value (analytical or book value) | 0.87 | | 0.87 | | 0.60 | | 0.60 | | 1.00 | |
| Percent Moisture | 95.83 | | 95.83 | | 68.00 | | 60.00 | | 35.00 | |
| Manure Group AEU's | 40.27 | | 40.27 | | 1.00 | | 4.60 | | 1.20 | |
| Description: Site & Season Applied | Concrete Tank Fall | | Concrete Tank Spring | | Pasture Year Round | | Horse Barn Spring, Summer & Fall | | Pasture Year Round | |
| Inventory Method | Records | | Records | | Calculated | | Calculated | | Calculated | |
| | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. |
| Manure Group Identification | Veal Manure Fall | | Veal Manure Spring | | Milk Cow | | Small Quantity Manure Group | | Alpaca | |
| | | | | | Milk Cow - uncollected | | Small Quantity Manure Group - uncollected | | Alpaca - uncollected | |
| CALCULATED: Total Manure Collected Per Manure Group | | | | | 0.0 | 20.3 | 15.9 | 36.3 | 0.0 | 7.1 |
| Units | | | | | Tons | Tons | Tons | Tons | Tons | Tons |
| RECORDS: Total Manure Collected Per Manure Group | 63,700.0 | | 63,700.0 | | | | | | | |
| Unit | gallons | | gallons | | | | | | | |
| Manure Used On-Farm | Collected 24,000.0 | Uncollected 0.0 | Collected 24,000.0 | Uncollected 0.0 | Collected 0.0 | Uncollected 20.3 | Collected 0.0 | Uncollected 36.3 | Collected 0.0 | Uncollected 7.0 |
| Units | Gallons | | Gallons | | Tons | Tons | Tons | Tons | Tons | Tons |
| Manure Exported | 59,700.0 | | 59,700.0 | | 0.0 | | 0.0 | | 0.0 | |
| Units | gallons | | gallons | | tons | | tons | | tons | |
| Manure Allocation Balance | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.9 | 0.0 | 0.0 | 0.1 |
| Units | Gallons | | Gallons | | Tons | Tons | Tons | Tons | Tons | Tons |
| Manure Balance as a Percent of Total Manure Collected | 0.0% | | 0.0% | | | | 100.0% | | | |
| Total Rainfall and Runoff | 0 | | 0 | | 0 | | 0 | | 0 | |
| | gallons | | gallons | | tons | | tons | | tons | |

| Appendix 3 Manure Group Information Crop Yrs. 2019 | Veal Manure Fall | | Veal Manure Spring | | Milk Cow | | Small Quantity Manure Group | | Alpaca | | | | |
|--|------------------------------------|--|------------------------------------|--|------------------------------------|--|---|---|------------------------------------|---|--|---------------|--|
| | Manure Generation per Animal Group | Uncollected Manure Nutrient Analysis Book Values | Manure Generation per Animal Group | Uncollected Manure Nutrient Analysis Book Values | Manure Generation per Animal Group | Uncollected Manure Nutrient Analysis Book Values | Manure Generation per Animal Group | Uncollected Manure Nutrient Analysis Book Values | Manure Generation per Animal Group | Uncollected Manure Nutrient Analysis Book Values | | | |
| Animal Group 1 | Veal Calf Fall | See 3 Input | Veal Calf Spring | Grazing Calculator | Milk Cow | 20 - Tons | Driving Horse | 33 - Tons | Female Alpaca | 5 - Tons | | | |
| Animal Type | Veal Calf 0-20 wk. | | Veal Calf 0-20 wk. | | Jersey Lactating Cow | | Milk Cow - uncollected Total Nitrogen (N) lbs/ton | | Light Horse Mature | | Driving Horse - uncollected Total Nitrogen (N) lbs/ton | Female Alpaca | |
| Animal Number | 300 | | 300 | | 1 | | 10.00 | | 4 | | ton | 6 | Female Alpaca - uncollected Total Nitrogen (N) lbs/ton |
| Animal Weight | 260 | | 260 | | 1000 | | Total Phosphate (P2O5) lbs/ton | | 1100 | | Total Phosphate (P2O5) lbs/ton | 145 | Total Phosphate (P2O5) lbs/ton |
| Animal Group AUs | 84.00 | | 84.00 | | 1.00 | | 4.00 | | 4.40 | | 55.00 | 0.87 | 3.90 |
| Animal Group AEUs | 40.27 | | 40.27 | | 1.00 | | Total Potash (K2O) lbs/ton | | 4.40 | | Total Potash (K2O) lbs/ton | 0.87 | Total Potash (K2O) lbs/ton |
| Daily Manure Production per AU | 7.0 | | 7.0 | | 111.0 | | 8.00 | | 55.0 | | 12.00 | 32.2 | 20.80 |
| Total Days Manure Produced | 175 | | 175 | | 365 | | PSC Value | | 365 | | PSC Value | 365 | PSC Value |
| Total Manure Produced | | | | | 20 | | 0.80 | | 44 | | 5.00 | 5 | 1.00 |
| Days On Pasture | 0 | | 0 | | 365 | | | | 275 | | | 365 | |
| Hours Per Day On Pasture | 0 | | 0 | | 24 | | | | 24 | | | 24 | |
| Total Bedding | | | | | 0 | | | | 2 | | | 0 | |
| Total Washwater | | | | | 0 | | | | 0 | | | 0 | |
| CALCULATED - Total Uncollected Manure Per Animal Group | | | | | 20.3 | | | | 33.3 | | | 5.1 | |
| CALCULATED-Total Manure Collected Per Animal Group | | | | | 0 | | | | 13 | | | 0 | |
| Animal Group 2 | | | | | | | Miniature Pony | Miniature Pony - uncollected Total Nitrogen (N) lbs/ton | Young Alpaca | Young Alpaca - uncollected Total Nitrogen (N) lbs/ton | | | |
| Animal Type | | | | | | | Miniature Horse Mature | 12.00 | Young Alpaca | 20.00 | | | |
| Animal Number | | | | | | | 2 | 12.00 | 2 | 20.00 | | | |
| Animal Weight | | | | | | | 200 | Total Phosphate (P2O5) lbs/ton | 60 | Total Phosphate (P2O5) lbs/ton | | | |
| Animal Group AUs | | | | | | | 0.40 | 5.00 | 0.16 | 3.90 | | | |
| Animal Group AEUs | | | | | | | 0.40 | Total Potash (K2O) lbs/ton | 0.16 | Total Potash (K2O) lbs/ton | | | |
| Daily Manure Production per AU | | | | | | | 55.0 | 9.00 | 32.2 | 20.80 | | | |
| Total Days Manure Produced | | | | | | | 365 | PSC Value | 365 | PSC Value | | | |
| Total Manure Produced | | | | | | | 4 | 0.80 | 1 | 1.00 | | | |
| Days On Pasture | | | | | | | 275 | | 365 | | | | |
| Hours Per Day On Pasture | | | | | | | 24 | | 24 | | | | |
| Total Bedding | | | | | | | 2 | | 0 | | | | |
| Total Washwater | | | | | | | 0 | | 0 | | | | |
| CALCULATED - Total Uncollected Manure Per Animal Group | | | | | | | 3.0 | 3 - Tons | 0.9 | 1 - Tons | | | |
| CALCULATED-Total Manure Collected Per Animal Group | | | | | | | 3 | | 0 | | | | |

| Appendix 3 Manure Group Information Crop Yrs. 2019 | Veal Manure Fat | | Veal Manure Spring | | Milk Cow | | Small Quantity Manure Group | | Alpaca | |
|--|------------------------------------|---|------------------------------------|---|------------------------------------|---|------------------------------------|---|------------------------------------|---|
| | Manure Generation per Animal Group | Uncollected Manure: Nutrient Analysis Book Values | Manure Generation per Animal Group | Uncollected Manure: Nutrient Analysis Book Values | Manure Generation per Animal Group | Uncollected Manure: Nutrient Analysis Book Values | Manure Generation per Animal Group | Uncollected Manure: Nutrient Analysis Book Values | Manure Generation per Animal Group | Uncollected Manure: Nutrient Analysis Book Values |
| Animal Group 3 | | | | | | | | | Male Alpaca | Male Alpaca - Uncollected Total Nitrogen (N) lb/ton 20.00 Total Phosphate (P2O5) lb/ton 3.50 Total Potash (K2O) lb/ton 20.50 PSC Value 1.00 |
| Animal Type | | | | | | | | | Male Alpaca | |
| Animal Number | | | | | | | | | 1 | |
| Animal Weight | | | | | | | | | 170 | |
| Animal Group AUs | | | | | | | | | 0.17 | |
| Animal Group AEUs | | | | | | | | | 0.17 | |
| Daily Manure Production per AU | | | | | | | | | 32.2 | |
| Total Days Manure Produced | | | | | | | | | 365 | |
| Total Manure Produced | | | | | | | | | 1 | |
| Days On Pasture | | | | | | | | | 365 | |
| Hours Per Day On Pasture | | | | | | | | | 24 | |
| Total Bedding | | | | | | | | | 0 | |
| Total Washwater | | | | | | | | | 0 | |
| CALCULATED - Total Uncollected Manure Per Animal Group | | | | | | | | | 1.0 | |
| CALCULATED-Total Manure Collected Per Animal Group | | | | | | | | | 0 | |

| Appendix 3 Manure Group Information Crop Yrs. 2020 | Veal Manure Fall | | Veal Manure Spring | | Milk Cow | | Small Quantity Manure Group | | Alpaca | |
|---|--|-------------------|-------------------------|-------------------|------------------------------------|-------------------|---|-------------------|------------------------------------|-------------------|
| Manure Report Date (note if averaging several reports) | October 1, 2018 | | October 1, 2018 | | Book Value | | Book Value | | Book Value | |
| Laboratory Name | Spectrum Analytic, Inc. | | Spectrum Analytic, Inc. | | Penn State Agronomy Guide | | Penn State Agronomy Guide | | State Conservation Commission | |
| Manure Type | Other | | Other | | Dairy | | Other | | Other | |
| Manure Unit (lb/ton or 1000 gal) | lb/1000 gal | | lb/1000 gal | | lb/ton | | lb/ton | | lb/ton | |
| Total Nitrogen (N) (lb/ton or 1000 gal) | 24.08 | | 24.08 | | 10.00 | | 12.00 | | 20.00 | |
| Ammonium N (NH ₄ -N) (lb/ton or 1000 gal) | 16.60 | | 16.60 | | Complete NH ₄ -N | | Complete NH ₄ -N | | Complete NH ₄ -N | |
| Total Organic N (lb/ton or 1000 gal) | 7.48 Go to NMP Index | | 7.48 | | Check N values in Manure Avg Input | | Check N values in Manure Avg Input | | Check N values in Manure Avg Input | |
| Total Phosphate (P ₂ O ₅) (lb/ton or 1000 gal) | 54.97 Go to Appendix 3 Input | | 54.97 | | 4.00 | | 5.00 | | 3.50 | |
| Total Potash (K ₂ O) (lb/ton or 1000 gal) | 16.87 Go to Manure Avg Input | | 16.87 | | 8.00 | | 9.00 | | 20.60 | |
| Percent Solids | 4.17 Grazing Calculator | | 4.17 | | 12.00 | | 20.00 | | 65.00 | |
| PSC Value (analytical or book value) | 0.87 | | 0.87 | | 0.80 | | 0.80 | | 1.00 | |
| Percent Moisture | 95.83 | | 95.83 | | 68.00 | | 60.00 | | 35.00 | |
| Manure Group AEU's | 40.27 | | 40.27 | | 1.00 | | 4.80 | | 1.20 | |
| Description: Site & Season Applied | Concrete Tank Fall | | Concrete Tank Spring | | Pasture Year Round | | Horse Barn Spring, Summer & Fall | | Pasture Year Round | |
| Inventory Method | Records | | Records | | Calculated | | Calculated | | Calculated | |
| | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. |
| Manure Group Identification | Veal Manure Fall | | Veal Manure Spring | | Milk Cow | | Small Quantity Manure Group | | Alpaca | |
| | | | | | Milk Cow - uncollected | | Small Quantity Manure Group - uncollected | | Alpaca - uncollected | |
| CALCULATED: Total Manure Collected Per Manure Group Units | | | | | 0.0 | 20.3 | 15.9 | 36.3 | 0.0 | 7.1 |
| | | | | | Tons | Tons | Tons | Tons | Tons | Tons |
| RECORDS: Total Manure Collected Per Manure Group Unit | 83,700.0 | | 83,700.0 | | | | | | | |
| | gallons | | gallons | | | | | | | |
| Manure Used On-Farm Units | Collected 24,000.0 | Uncollected 0.0 | Collected 24,000.0 | Uncollected 0.0 | Collected 0.0 | Uncollected 20.3 | Collected 0.0 | Uncollected 36.3 | Collected 0.0 | Uncollected 7.0 |
| | Gallons | | Gallons | | Tons | Tons | Tons | Tons | Tons | Tons |
| Manure Exported Units | 59,700.0 | | 59,700.0 | | 0.0 | | 0.0 | | 0.0 | |
| | gallons | | gallons | | tons | | tons | | tons | |
| Manure Allocation Balance Units | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.9 | 0.0 | 0.0 | 0.1 |
| | Gallons | | Gallons | | Tons | Tons | Tons | Tons | Tons | Tons |
| Manure Balance as a Percent of Total Manure Collected | 0.0% | | 0.0% | | | | 100.0% | | | |
| Total Rainfall and Runoff | 0 | | 0 | | 0 | | 0 | | 0 | |
| | gallons | | gallons | | tons | | tons | | tons | |

| Appendix 3 Manure Group Information Crop Yrs. 2021 | Veal Manure Fall | | Veal Manure Spring | | Milk Cow | | Small Quantity Manure Group | | Alpaca | |
|--|-------------------------|--|-------------------------|-------------------|------------------------------------|------------------------|------------------------------------|---|------------------------------------|----------------------|
| Manure Report Date (note if averaging several reports) | October 1, 2018 | | October 1, 2018 | | Book Value | | Book Value | | Book Value | |
| Laboratory Name | Spectrum Analytic, Inc. | | Spectrum Analytic, Inc. | | Penn State Agronomy Guide | | Penn State Agronomy Guide | | State Conservation Commission | |
| Manure Type | Other | | Other | | Dairy | | Other | | Other | |
| Manure Unit (lbs/ton or 1000 gal) | lb/1000 gal | | lb/1000 gal | | lb/ton | | lb/ton | | lb/ton | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 24.03 | | 24.03 | | 10.00 | | 12.00 | | 20.00 | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 16.60 | | 16.60 | | Complete NH ₄ -N | | Complete NH ₄ -N | | Complete NH ₄ -N | |
| Total Organic N (lbs/ton or 1000 gal) | 7.48 | Go to JMP Input | 7.48 | | Check N values in Manure Avg Input | | Check N values in Manure Avg Input | | Check N values in Manure Avg Input | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 54.97 | Go to Appendix 3 Input | 54.97 | | 4.00 | | 5.00 | | 3.90 | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 16.87 | Go to Manure Avg Input | 16.87 | | 8.00 | | 9.00 | | 20.60 | |
| Percent Solids | 4.17 | Grainex Calculator | 4.17 | | 12.00 | | 20.00 | | 65.00 | |
| PSC Value (analytical or book value) | 0.87 | | 0.87 | | 0.80 | | 0.80 | | 1.00 | |
| Percent Moisture | 95.83 | | 95.83 | | 83.00 | | 80.00 | | 35.00 | |
| Manure Group AEU's | 40.27 | | 40.27 | | 1.00 | | 4.80 | | 1.20 | |
| Description: Site & Season Applied | Concrete Tank Fall | | Concrete Tank Spring | | Pasture Year Round | | Horse Barn Spring, Summer & Fall | | Pasture Year Round | |
| Inventory Method | Records | | Records | | Calculated | | Calculated | | Calculated | |
| | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. |
| Manure Group Identification | Veal Manure Fall | | Veal Manure Spring | | Milk Cow | | Small Quantity Manure Group | | Alpaca | |
| | | | | | | Milk Cow - uncollected | | Small Quantity Manure Group - uncollected | | Alpaca - uncollected |
| CALCULATED: Total Manure Collected Per Manure Group | | | | | 0.0 | 20.3 | 15.9 | 36.3 | 0.0 | 7.1 |
| Units | | | | | Tons | Tons | Tons | Tons | Tons | Tons |
| RECORDS: Total Manure Collected Per Manure Group | 83,700.0 | | 83,700.0 | | | | | | | |
| Unit | gallons | | gallons | | | | | | | |
| Manure Used On-Farm | Collected 24,000.0 | Uncollected 0.0 | Collected 24,000.0 | Uncollected 0.0 | Collected 0.0 | Uncollected 20.3 | Collected 0.0 | Uncollected 36.3 | Collected 0.0 | Uncollected 7.0 |
| Units | Gallons | | Gallons | | Tons | Tons | Tons | Tons | Tons | Tons |
| Manure Exported | 59,700.0 | | 59,700.0 | | 0.0 | | 0.0 | | 0.0 | |
| Units | gallons | | gallons | | tons | | tons | | tons | |
| Manure Allocation Balance | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.9 | 0.0 | 0.0 | 0.1 |
| Units | Gallons | | Gallons | | Tons | Tons | Tons | Tons | Tons | Tons |
| Manure Balance as a Percent of Total Manure Collected | 0.0% | | 0.0% | | | | 100.0% | | | |
| Total Rainfall and Runoff | 0 | | 0 | | 0 | | 0 | | 0 | |
| | gallons | | gallons | | tons | | tons | | tons | |

| Manure Analysis 5 Year Running Average | | | | | | |
|--|-------------------------|-------------------------|-------------|-------------|-------------|-------------|
| Manure Average for Crop Years, 2019 | Veal Manure Fall | | | | | |
| | Average | 1 year ago | 2 years ago | 3 years ago | 4 years ago | 5 years ago |
| Manure Report Date | Oct 01 2018 | Oct 01 2018 | Jul 21 2015 | | | |
| Laboratory Name | Spectrum Analytic, Inc. | Spectrum Analytic, Inc. | Penn State | | | |
| Manure Type | Other | Other | Other | | | |
| Manure Unit (lbs/ton or 1000 gal) | lb/1000 gal | lb/1000 gal | lb/1000 gal | | | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 24.08 | 28.70 | 19.45 | | | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 16.60 | 18.30 | 14.89 | | | |
| Total Organic N (lbs/ton or 1000 gal) | 7.48 | 10.40 | 4.56 | | | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 54.97 | 43.50 | 66.44 | | | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 16.87 | 16.50 | 17.23 | | | |
| Percent Solids | 4.17 | 3.74 | 4.60 | | | |
| PSC Value (Enter analytical or book value) | 0.87 | 0.74 | 1.00 | | | |

| Manure Average for Crop Years, 2019 | Veal Manure Spring | | | | | |
|--|-------------------------|-------------------------|-------------|-------------|-------------|-------------|
| | Average | 1 year ago | 2 years ago | 3 years ago | 4 years ago | 5 years ago |
| Manure Report Date | Oct 01 2018 | Oct 01 2018 | Jul 21 2015 | | | |
| Laboratory Name | Spectrum Analytic, Inc. | Spectrum Analytic, Inc. | Penn State | | | |
| Manure Type | Other | Other | Other | | | |
| Manure Unit (lbs/ton or 1000 gal) | lb/1000 gal | lb/1000 gal | lb/1000 gal | | | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 24.08 | 28.70 | 19.45 | | | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 16.60 | 18.30 | 14.89 | | | |
| Total Organic N (lbs/ton or 1000 gal) | 7.48 | 10.40 | 4.56 | | | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 54.97 | 43.50 | 66.44 | | | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 16.87 | 16.50 | 17.23 | | | |
| Percent Solids | 4.17 | 3.74 | 4.60 | | | |
| PSC Value (Enter analytical or book value) | 0.87 | 0.74 | 1.00 | | | |

| Manure Average for Crop Years, 2019 | Milk Cow | | | | | |
|--|-----------------------------|---------------------------|-------------|-------------|-------------|-------------|
| | Average | 1 year ago | 2 years ago | 3 years ago | 4 years ago | 5 years ago |
| Manure Report Date | Book Value | Book Value | | | | |
| Laboratory Name | Penn State Agronomy Guide | Penn State Agronomy Guide | | | | |
| Manure Type | Dairy | Dairy | | | | |
| Manure Unit (lbs/ton or 1000 gal) | lb/ton | lb/ton | | | | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 10.00 | 10.00 | | | | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | Complete NH ₄ -N | | | | | |
| Total Organic N (lbs/ton or 1000 gal) | | 10.00 | | | | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 4.00 | 4.00 | | | | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 8.00 | 8.00 | | | | |
| Percent Solids | 12.00 | 12.00 | | | | |
| PSC Value (Enter analytical or book value) | 0.80 | 0.80 | | | | |

Manure Analysis 5 Year Running Average

| Manure Average for Crop Years. 2019 | Small Quantity Manure Group | | | | | |
|---|-----------------------------|---------------------------|-------------|-------------|-------------|-------------|
| | Average | 1 year ago | 2 years ago | 3 years ago | 4 years ago | 5 years ago |
| Manure Report Date | Book Value | Book Value | | | | |
| Laboratory Name | Penn State Agronomy Guide | Penn State Agronomy Guide | | | | |
| Manure Type | Other | Other | | | | |
| Manure Unit (lb/ton or 1000 gal) | lb/ton | lb/ton | | | | |
| Total Nitrogen (N) (lb/ton or 1000 gal) | 12.00 | 12.00 | | | | |
| Ammonium N (NH ₄ -N) (lb/ton or 1000 gal) | Complete NH ₄ -N | | | | | |
| Total Organic N (lb/ton or 1000 gal) | | 12.00 | | | | |
| Total Phosphate (P ₂ O ₅) (lb/ton or 1000 gal) | 5.00 | 5.00 | | | | |
| Total Potash (K ₂ O) (lb/ton or 1000 gal) | 9.00 | 9.00 | | | | |
| Percent Solids | 20.00 | 20.00 | | | | |
| PSC Value (Enter analytical or book value) | 0.80 | 0.80 | | | | |

| Manure Average for Crop Years. 2019 | Alpaca | | | | | |
|---|-------------------------------|-------------------------------|-------------|-------------|-------------|-------------|
| | Average | 1 year ago | 2 years ago | 3 years ago | 4 years ago | 5 years ago |
| Manure Report Date | Book Value | Book Value | | | | |
| Laboratory Name | State Conservation Commission | State Conservation Commission | | | | |
| Manure Type | Other | Other | | | | |
| Manure Unit (lb/ton or 1000 gal) | lb/ton | lb/ton | | | | |
| Total Nitrogen (N) (lb/ton or 1000 gal) | 20.00 | 20.00 | | | | |
| Ammonium N (NH ₄ -N) (lb/ton or 1000 gal) | Complete NH ₄ -N | | | | | |
| Total Organic N (lb/ton or 1000 gal) | | 20.00 | | | | |
| Total Phosphate (P ₂ O ₅) (lb/ton or 1000 gal) | 3.90 | 3.90 | | | | |
| Total Potash (K ₂ O) (lb/ton or 1000 gal) | 20.80 | 20.80 | | | | |
| Percent Solids | 65.00 | 65.00 | | | | |
| PSC Value (Enter analytical or book value) | 1.00 | 1.00 | | | | |

| App. 4: Crop Yrs. 2019 | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | |
|--|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|---|----------------------------|--------|--|----------------------------|--------|
| CMU Field ID | 48 | | | 48 | | | 48 | | | 48 | | | 48 | | |
| Acres | 48 | | | 48 | | | 48 | | | 48 | | | 48 | | |
| Soil Test Report Date | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | |
| Soil Test Levels (Match P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH |
| | 84 | 75 | 6.0 | 84 | 75 | 6.0 | 84 | 75 | 6.0 | 84 | 75 | 6.0 | 84 | 75 | 6.0 |
| P Index Part A Evaluation | No to All Part A | | | No to All Part A | | | No to All Part A | | | No to All Part A | | | No to All Part A | | |
| Part A Result | N Based | | | N Based | | | N Based | | | N Based | | | N Based | | |
| Crop | Established Mixed Grasses | | | Established Mixed Grasses | | | Established Mixed Grasses | | | Established Mixed Grasses | | | Established Mixed Grasses | | |
| Planned Yield | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | |
| PSU Soil Test Recommendation (t/A) | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 |
| | 200 | 0 | 210 | 200 | 0 | 210 | 200 | 0 | 210 | 200 | 0 | 210 | 200 | 0 | 210 |
| User Soil Test Recommendation (t/A) | | | | | | | | | | | | | | | |
| Other Nutrients Applied (t/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Double Crop Carryover N (t/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (t/A) | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (t/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (t/A) | 165 | 0 | 210 | 161 | -4 | 163 | 160 | -5 | 164 | 159 | -6 | 160 | 135 | -281 | 96 |
| Manure Group | Femal Apaca - Uncollected | | | Young Apaca - Uncollected | | | Male Apaca - Uncollected | | | Veal Manure Fall | | | Veal Manure Spring | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | | Early Fall - Early spring utilization and winter crop in double crop system incorporated after 7 days or none | | | Spring - Spring or summer utilization - incorporation after 7 days or none | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | | | | | | | | | | | | | | |
| N Balanced Manure Rate (ton or gal/A) | 41 tons/A | | | 40 tons/A | | | 40 tons/A | | | 32,988 gal/A | | | 28,003 gal/A | | |
| P Removal Balance Manure Rate (ton or gal/A, if required by P Index) | 15 tons/A | | | 14 tons/A | | | 14 tons/A | | | 692 gal/A | | | 0 gal/A | | |
| | Crop P Removal (t/A) 60.0 | | | Crop P Removal (t/A) 66.0 | | | Crop P Removal (t/A) 55.0 | | | Crop P Removal (t/A) 54.0 | | | Crop P Removal (t/A) 0.0 | | |
| P Index Value | | | | | | | | | | | | | | | |
| Planned Manure Rate (ton or gal/A) | 1.06 tons/A | | | 0.19 tons/A | | | 0.2 tons/A | | | 5000 gal/A | | | 5000 gal/A | | |
| Nutrients Applied at Planned Manure Rate (t/A) | 4 | 4 | 22 | 1 | 1 | 4 | 1 | 1 | 4 | 24 | 275 | 84 | 24 | 275 | 84 |
| Nutrient Balance after Manure | 161 | -4 | 163 | 160 | -5 | 164 | 159 | -6 | 160 | 135 | -281 | 96 | 111 | -556 | 12 |
| Supplemental Fertilizer (t/A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 111 | 0 | 12 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Final Nutrient Balance (t/A) | | | | | | | | | | | | | 0 | -556 | 0 |
| Multiple Application | Multiple Initial | | | Multiple | | | Multiple | | | Multiple | | | Multiple Final | | |
| Manure Utilized on CMU | 5 tons | | | 1 tons | | | 1 tons | | | 24,000 gal/tons | | | 24,000 gal/tons | | |

| App. 4: Crop Yrs. 2019 | 2 | | | 2 | | | 2 | | | 3 | | | 3 | | |
|--|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|
| CMU Field ID | | | | | | | | | | | | | | | |
| Acres | 1.5 | | | 1.5 | | | 1.5 | | | 1.9 | | | 1.9 | | |
| Soil Test Report Date | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH |
| | 65 | 92 | 5.8 | 65 | 92 | 5.8 | 65 | 92 | 5.8 | 65 | 92 | 5.8 | 65 | 92 | 5.8 |
| P Index Part A Evaluation | No to All Part A | | | No to All Part A | | | No to All Part A | | | No to All Part A | | | No to All Part A | | |
| Part A Result | N Based | | | N Based | | | N Based | | | N Based | | | N Based | | |
| Crop | Established Pasture (without legume) | | | Established Pasture (without legume) | | | Established Pasture (without legume) | | | Established Pasture (without legume) | | | Established Pasture (without legume) | | |
| Planned Yield | 2.5 ton/A | | | 2.5 ton/A | | | 2.5 ton/A | | | 2.5 ton/A | | | 2.5 ton/A | | |
| PSU Soil Test Recommendation (b/A) | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 |
| | 125 | 0 | 100 | 125 | 0 | 100 | 125 | 0 | 100 | 125 | 0 | 100 | 125 | 0 | 100 |
| User Soil Test Recommendation (b/A) | | | | | | | | | | | | | | | |
| Other Nutrients Applied (b/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Days to Crop Carryover N (b/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (b/A) | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (b/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (b/A) | 90 | 0 | 100 | 78 | -24 | 52 | 55 | -73 | -36 | 90 | 0 | 100 | 78 | -24 | 52 |
| Manure Group | MIX Cow - Uncollected | | | Driving Horse - Uncollected | | | Mixture Pony - Uncollected | | | MIX Cow - Uncollected | | | Driving Horse - Uncollected | | |
| Application Season Management (Incorporation, cover crops, etc.) | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | | | | | | | | | | | | | | |
| N Balanced Manure Rate (ton, gal/A) | 45 tons/A | | | 33 tons/A | | | 23 tons/A | | | 45 tons/A | | | 33 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A, if required by P Index) | 9 tons/A | | | 3 tons/A | | | 0 tons/A | | | 9 tons/A | | | 3 tons/A | | |
| | Crop P Removal (b/A) 37.5 | | | Crop P Removal (b/A) 13.5 | | | Crop P Removal (b/A) 0.0 | | | Crop P Removal (b/A) 37.5 | | | Crop P Removal (b/A) 13.5 | | |
| P Index Value | | | | | | | | | | | | | | | |
| Planned Manure Rate (ton or gal/A) | 6.97 tons/A | | | 9.79 tons/A | | | 0.88 tons/A | | | 5.97 tons/A | | | 9.79 tons/A | | |
| Nutrients Applied at Planned Manure Rate (b/A) | 12 | 24 | 48 | 23 | 49 | 83 | 2 | 4 | 8 | 12 | 24 | 48 | 23 | 49 | 83 |
| Nutrient Balance after Manure | 78 | -24 | 52 | 55 | -73 | -36 | 53 | -77 | -44 | 78 | -24 | 52 | 55 | -73 | -36 |
| Supplemental Fertilizer (b/A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Final Nutrient Balance (b/A) | | | | | | | 0 | | | | | | | | |
| Multiple Application | Multiple Initial | | | Multiple | | | Multiple Final | | | Multiple Initial | | | Multiple | | |
| Manure Utilized on CMU | 9 tons | | | 15 tons | | | 1 tons | | | 11 tons | | | 19 tons | | |

| App. 4: Crop Yrs. 2019 | | 3 | | |
|---|--|----------------------------|--------|--|
| CMU Field ID | | | | |
| Acres | 1.9 | | | |
| Soil Test Report Date | October 1, 2018 | | | |
| Laboratory Name | Spectrum Analytic, Inc | | | |
| Soil Test Levels (MaFsch-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | |
| | 85 | 92 | 5.8 | |
| P Index Part A Evaluation | No to A3 Part A | | | |
| Part A Result | N Based | | | |
| Crop | Established Pasture (without legume) | | | |
| Planned Yield | 2.5 ton/A | | | |
| PSU Soil Test Recommendation (lb/A) | N | P2O5 | K2O | |
| | 125 | 0 | 100 | |
| User Soil Test Recommendation (lb/A) | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | |
| P Index Application Method | | | | |
| Double Crop Carry Over N (lb/A) | 0 | | | |
| Manure History Description Residual Manure N (lb/A) | 0 | Continuously - Summer Crop | | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | |
| Net Nutrients Required (lb/A) | 55 | -73 | -35 | |
| Manure Group | Mixture Poo - Uncollected | | | |
| Application Season/ Management (Incorporation, cover crops, etc.) | Grazing anytime with nutrient uptake during growing season | | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | |
| | 0.20 | | | |
| P Index Application Method | | | | |
| N Balanced Manure Rate (ton, gal/A) | 23 tons/A | | | |
| P Removal Balance Manure Rate (ton or gal/A, if required by P Index) | 0 tons/A | | | |
| | Crop P Removal (lb/A) 0.0 | | | |
| P Index Value | | | | |
| Planned Manure Rate (ton or gal/A) | 0.88 tons/A | | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 2 | 4 | 8 | |
| Nutrient Balance after Manure | 53 | -77 | -44 | |
| Supplemental Fertilizer (lb/A) | 53 | 0 | 0 | |
| P Index Application Method | | | | |
| Final Nutrient Balance (lb/A) | 0 | -77 | -44 | |
| Multiple Application | Multiple Final | | | |
| Manure Utilized on CMU | 2 tons | | | |

| App. 4: Crop Yrs. 2020 | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | |
|--|--|----------------------------|------------|--|----------------------------|------------|--|----------------------------|------------|--|----------------------------|------------|--|----------------------------|------------|
| CMU Field ID | 48 | | | 48 | | | 48 | | | 48 | | | 48 | | |
| Acres | 48 | | | 48 | | | 48 | | | 48 | | | 48 | | |
| Soil Test Report Date | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P 94 | ppm K 75 | pH 6.0 | ppm P 94 | ppm K 75 | pH 6.0 | ppm P 94 | ppm K 75 | pH 6.0 | ppm P 94 | ppm K 75 | pH 6.0 | ppm P 94 | ppm K 75 | pH 6.0 |
| P Index Part A Evaluation | No to All Part A | | | No to All Part A | | | No to All Part A | | | No to All Part A | | | No to All Part A | | |
| Part A Result | N Based | | | N Based | | | N Based | | | N Based | | | N Based | | |
| Crop | Established Mixed Grasses | | | Established Mixed Grasses | | | Established Mixed Grasses | | | Established Mixed Grasses | | | Established Mixed Grasses | | |
| Planned Yield | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | |
| PSU Soil Test Recommendation (b/A) | N 200 | P205 0 | K20 210 | N 200 | P205 0 | K20 210 | N 200 | P205 0 | K20 210 | N 200 | P205 0 | K20 210 | N 200 | P205 0 | K20 210 |
| User Soil Test Recommendation (b/A) | | | | | | | | | | | | | | | |
| Other Nutrients Applied (b/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Double Crop Carryover N (b/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (b/A) | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (b/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (b/A) | 165 | 0 | 210 | 161 | -4 | 168 | 160 | -5 | 164 | 159 | -6 | 160 | 135 | -281 | 96 |
| Manure Group | Female Alpaca - Uncollected | | | Young Alpaca - Uncollected | | | Male Alpaca - Uncollected | | | Veal Manure Fall | | | Veal Manure Spring | | |
| Application Season Management (Incorporation, cover crops, etc.) | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | | Early Fall - Early spring utilization and winter crop in double crop system. Incorporated after 7 days or none | | | Spring - Spring or summer utilization. Incorporated after 7 days or none | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N 0.20 | NH4-N | Org. N | Total N 0.20 | NH4-N | Org. N | Total N 0.20 | NH4-N | Org. N | Total N 0.20 | NH4-N | Org. N | Total N 0.20 | NH4-N | Org. N |
| P Index Application Method | | | | | | | | | | | | | | | |
| N Balanced Manure Rate (ton, gal/A) | 41 tons/A | | | 49 tons/A | | | 40 tons/A | | | 32,558 gal/A | | | 28,008 gal/A | | |
| P Removal Balance Manure Rate (ton or gal/A, if required by P Index) | 15 tons/A | | | 14 tons/A | | | 14 tons/A | | | 582 gal/A | | | 0 gal/A | | |
| Crop P Removal (b/A) 60.0 | Crop P Removal (b/A) 60.0 | | | Crop P Removal (b/A) 56.0 | | | Crop P Removal (b/A) 55.0 | | | Crop P Removal (b/A) 54.0 | | | Crop P Removal (b/A) 0.0 | | |
| P Index Value | | | | | | | | | | | | | | | |
| Planned Manure Rate (ton or gal/A) | 1.06 tons/A | | | 0.19 tons/A | | | 0.2 tons/A | | | 5000 gal/A | | | 5000 gal/A | | |
| Nutrients Applied at Planned Manure Rate (b/A) | 4 | 4 | 22 | 1 | 1 | 4 | 1 | 1 | 4 | 24 | 275 | 84 | 24 | 275 | 84 |
| Nutrient Balance after Manure | 161 | -4 | 168 | 160 | -5 | 164 | 159 | -6 | 160 | 135 | -281 | 96 | 111 | -556 | 12 |
| Supplemental Fertilizer (b/A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 111 | 0 | 12 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Final Nutrient Balance (b/A) | | | | | | | | | | | | | 0 | | |
| Multiple Application | Multiple Initial | | | Multiple | | | Multiple | | | Multiple | | | Multiple Final | | |
| Manure Utilized on CMU | 5 tons | | | 1 tons | | | 1 tons | | | 24,000 gallons | | | 24,000 gallons | | |

| App. 4: Crop Yrs. 2020 | 2 | | | 2 | | | 2 | | | 3 | | | 3 | | |
|--|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|
| CMU Field ID | | | | | | | | | | | | | | | |
| Acres | 1.5 | | | 1.5 | | | 1.5 | | | 1.9 | | | 1.9 | | |
| Soil Test Report Date | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH |
| | 65 | 92 | 5.8 | 65 | 92 | 5.8 | 65 | 92 | 5.8 | 65 | 92 | 5.8 | 65 | 92 | 5.8 |
| P Index Part A Evaluation | No to All Part A | | | No to All Part A | | | No to All Part A | | | No to All Part A | | | No to All Part A | | |
| Part A Result | N Based | | | N Based | | | N Based | | | N Based | | | N Based | | |
| Crop | Established Pasture (without legume) | | | Established Pasture (without legume) | | | Established Pasture (without legume) | | | Established Pasture (without legume) | | | Established Pasture (without legume) | | |
| Planned Yield | 2.5 ton/A | | | 2.5 ton/A | | | 2.5 ton/A | | | 2.5 ton/A | | | 2.5 ton/A | | |
| PSU Soil Test Recommendation (lb/A) | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 |
| | 125 | 0 | 100 | 125 | 0 | 100 | 125 | 0 | 100 | 125 | 0 | 100 | 125 | 0 | 100 |
| User Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Double Crop Carry Over N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 90 | 0 | 100 | 78 | -24 | 52 | 65 | -73 | -36 | 60 | 0 | 100 | 78 | -24 | 52 |
| Manure Group | Milk Cow - Uncollected | | | Driving Horse - Uncollected | | | Miniature Pony - Uncollected | | | Milk Cow - Uncollected | | | Driving Horse - Uncollected | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | | | | | | | | | | | | | | |
| N Balanced Manure Rate (ton or gal/A) | 45 tons/A | | | 33 tons/A | | | 23 tons/A | | | 45 tons/A | | | 33 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A, if required by P Index) | 9 tons/A | | | 3 tons/A | | | 0 tons/A | | | 9 tons/A | | | 3 tons/A | | |
| | Crop P Removal (lb/A) 37.5 | | | Crop P Removal (lb/A) 13.5 | | | Crop P Removal (lb/A) 0.0 | | | Crop P Removal (lb/A) 37.5 | | | Crop P Removal (lb/A) 13.5 | | |
| P Index Value | | | | | | | | | | | | | | | |
| Planned Manure Rate (ton or gal/A) | 5.97 tons/A | | | 9.79 tons/A | | | 0.88 tons/A | | | 5.97 tons/A | | | 9.79 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 12 | 24 | 45 | 23 | 49 | 88 | 2 | 4 | 8 | 12 | 24 | 48 | 23 | 49 | 88 |
| Nutrient Balance after Manure | 78 | -24 | 52 | 55 | -73 | -36 | 53 | -77 | -44 | 78 | -24 | 52 | 55 | -73 | -36 |
| Supplemental Fertilizer (lb/A) | 0 | 0 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | | | | | | 0 | -77 | -44 | | | | | | |
| Multiple Application | Multiple Initial | | | Multiple | | | Multiple Final | | | Multiple Initial | | | Multiple | | |
| Manure Utilized on CMU | 9 tons | | | 15 tons | | | 1 tons | | | 11 tons | | | 19 tons | | |

| | | | |
|--|--|----------------------------|--------|
| App. 4: Crop Yrs. 2020 | 3 | | |
| CMUFieldID | | | |
| Acres | 1.9 | | |
| Soil Test Report Date | October 1, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH |
| | 85 | 92 | 5.8 |
| P Index Part A Evaluation | No to All Part A | | |
| Part A Result | N Based | | |
| Crop | Established Pasture (without legume) | | |
| Planned Yield | 2.5 ton/A | | |
| PSU Soil Test Recommendation (lb/A) | N | P205 | K2O |
| | 125 | 0 | 100 |
| User Soil Test Recommendation (lb/A) | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 |
| P Index Application Method | | | |
| Double Crop CarryOver N (lb/A) | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 0 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 55 | -73 | -38 |
| Manure Group | Manure Pony - Uncollected | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Grazing anytime with nutrient uptake during growing season | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N |
| | 0.20 | | |
| P Index Application Method | | | |
| N Balanced Manure Rate (ton, gal/A) | 23 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A, if required by P Index) | 0 tons/A | | |
| | Crop P Removal (lb/A) 0 0 | | |
| P Index Value | | | |
| Planned Manure Rate (ton or gal/A) | 0.88 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 2 | 4 | 8 |
| Nutrient Balance after Manure | 53 | -77 | -44 |
| Supplemental Fertilizer (lb/A) | 53 | 0 | 0 |
| P Index Application Method | | | |
| Final Nutrient Balance (lb/A) | 0 | -77 | -44 |
| Multiple Application | Multiple Final | | |
| Manure Utilized on CMU | 2 tons | | |

| App. 4: Crop Yrs. 2021 | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | |
|--|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| CMU Field ID | | | | | | | | | | | | | | | |
| Acres | 4.8 | | | 4.8 | | | 4.8 | | | 4.8 | | | 4.8 | | |
| Soil Test Report Date | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH |
| | 94 | 75 | 6.0 | 94 | 75 | 6.0 | 94 | 75 | 6.0 | 94 | 75 | 6.0 | 94 | 75 | 6.0 |
| P Index Part A Evaluation | No to All Part A | | | No to All Part A | | | No to All Part A | | | No to All Part A | | | No to All Part A | | |
| Part A Result | N Based | | | N Based | | | N Based | | | N Based | | | N Based | | |
| Crop | Established Mixed Grasses | | | Established Mixed Grasses | | | Established Mixed Grasses | | | Established Mixed Grasses | | | Established Mixed Grasses | | |
| Planned Yield | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | |
| PSU Soil Test Recommendation (lb/A) | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 |
| | 200 | 0 | 210 | 200 | 0 | 210 | 200 | 0 | 210 | 200 | 0 | 210 | 200 | 0 | 210 |
| User Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 165 | 0 | 210 | 161 | -4 | 163 | 160 | -5 | 164 | 159 | -6 | 160 | 135 | -281 | 96 |
| Manure Group | Femal Apeace - Uncollected | | | Young Apeace - Uncollected | | | Ma's Apeace - Uncollected | | | Veal Manure Fall | | | Veal Manure Spring | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | | Early Fall: Early spring utilization incl. winter crop in double crop system. Incorporated after 7 days or none | | | Spring: Spring or summer utilization. Incorporated after 7 days or none | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | | | | | | | | | | | | | | |
| N Balanced Manure Rate (ton, gal/A) | 41 tons/A | | | 40 tons/A | | | 40 tons/A | | | 32,988 gal/A | | | 28,008 gal/A | | |
| P Removal Balance Manure Rate (ton or gal/A; if required by P Index) | 15 tons/A | | | 14 tons/A | | | 14 tons/A | | | 892 gal/A | | | 0 gal/A | | |
| Crop P Removal (lb/A) 60.0 | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 55.0 | | | Crop P Removal (lb/A) 54.0 | | | Crop P Removal (lb/A) 0.0 | | |
| P Index Value | | | | | | | | | | | | | | | |
| Planned Manure Rate (ton or gal/A) | 1.06 tons/A | | | 0.19 tons/A | | | 0.2 tons/A | | | 5000 gal/A | | | 5000 gal/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 4 | 4 | 22 | 1 | 1 | 4 | 1 | 1 | 4 | 24 | 275 | 84 | 24 | 275 | 84 |
| Nutrient Balance after Manure | 161 | -4 | 168 | 160 | -5 | 164 | 159 | -6 | 160 | 135 | -281 | 96 | 111 | -556 | 12 |
| Supplemental Fertilizer (lb/A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 111 | 0 | 12 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | | | | | | | | | | | | 0 | | |
| Multiple Application | Multiple Initial | | | Multiple | | | Multiple | | | Multiple | | | Multiple Final | | |
| Manure Utilized on CMU | 5 tons | | | 1 tons | | | 1 tons | | | 24,000 gallons | | | 24,000 gallons | | |

| App. 4: Crop Yrs. 2021 | 2 | | | 2 | | | 2 | | | 3 | | | 3 | | |
|--|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|
| CMU Field ID | 15 | | | 15 | | | 15 | | | 19 | | | 19 | | |
| Acres | 15 | | | 15 | | | 15 | | | 19 | | | 19 | | |
| Soil Test Report Date | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | | October 1, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | | Spectrum Analytic, Inc | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH |
| | 85 | 92 | 5.8 | 85 | 92 | 5.8 | 85 | 92 | 5.8 | 65 | 92 | 5.8 | 65 | 92 | 5.8 |
| P Index Part A Evaluation | No to All Part A | | | No to All Part A | | | No to All Part A | | | No to All Part A | | | No to All Part A | | |
| Part A Result | N Based | | | N Based | | | N Based | | | N Based | | | N Based | | |
| Crop | Established Pasture (without legume) | | | Established Pasture (without legume) | | | Established Pasture (without legume) | | | Established Pasture (without legume) | | | Established Pasture (without legume) | | |
| Planned Yield | 2.5 ton/A | | | 2.5 ton/A | | | 2.5 ton/A | | | 2.5 ton/A | | | 2.5 ton/A | | |
| PSU Soil Test Recommendation (lb/A) | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 | N | P205 | K20 |
| | 125 | 0 | 100 | 125 | 0 | 100 | 125 | 0 | 100 | 125 | 0 | 100 | 125 | 0 | 100 |
| User Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Double Crop Carryover N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 90 | 0 | 100 | 78 | -24 | 52 | 55 | -73 | -36 | 90 | 0 | 100 | 78 | -24 | 52 |
| Manure Group | Milk Cow - Uncollected | | | Driving Horse - Uncollected | | | Miniature Pony - Uncollected | | | Milk Cow - Uncollected | | | Driving Horse - Uncollected | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | | Grazing anytime with nutrient uptake during growing season | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | | | | | | | | | | | | | | | |
| N Balanced Manure Rate (ton, gal/A) | 45 tons/A | | | 33 tons/A | | | 23 tons/A | | | 45 tons/A | | | 33 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; if required by P Index) | 9 tons/A | | | 3 tons/A | | | 0 tons/A | | | 9 tons/A | | | 3 tons/A | | |
| P Index Value | Crop P Removal (lb/A) 37.5 | | | Crop P Removal (lb/A) 13.5 | | | Crop P Removal (lb/A) 0.0 | | | Crop P Removal (lb/A) 37.5 | | | Crop P Removal (lb/A) 13.5 | | |
| Planned Manure Rate (ton or gal/A) | 5.97 tons/A | | | 9.79 tons/A | | | 0.88 tons/A | | | 5.97 tons/A | | | 9.79 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 12 | 24 | 48 | 23 | 49 | 88 | 2 | 4 | 8 | 12 | 24 | 48 | 23 | 49 | 88 |
| Nutrient Balance after Manure | 78 | -24 | 52 | 55 | -73 | -36 | 53 | -77 | -44 | 78 | -24 | 52 | 55 | -73 | -36 |
| Supplemental Fertilizer (lb/A) | 0 | 0 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | | | | | | 0 | -77 | -44 | | | | | | |
| Multiple Application | Multiple Initial | | | Multiple | | | Multiple Final | | | Multiple Initial | | | Multiple | | |
| Manure Utilized on CMU | 9 tons | | | 15 tons | | | 1 tons | | | 11 tons | | | 19 tons | | |

| App. 4: Crop Yrs. 2021 | | 3 | | |
|--|--|----------------------------|--------|--|
| CMU Field ID | 19 | | | |
| Acres | 1.9 | | | |
| Soil Test Report Date | October 1, 2018 | | | |
| Laboratory Name | Spectrum Analytic, Inc | | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | |
| | 85 | 92 | 5.8 | |
| P Index Part A Evaluation | No to All Part A | | | |
| Part A Result | N Based | | | |
| Crop | Established Pasture (without legume) | | | |
| Planned Yield | 2.5 ton/A | | | |
| PSU Soil Test Recommendation (lb/A) | N | P205 | K2O | |
| | 125 | 0 | 100 | |
| User Soil Test Recommendation (lb/A) | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | |
| P Index Application Method | | | | |
| Double Crop Carry Over N (lb/A) | 0 | | | |
| Manure History Description Residual Manure N (lb/A) | 0 | Continuously - Summer Crop | | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | |
| Net Nutrients Required (lb/A) | 55 | -73 | -36 | |
| Manure Group | Miniature Pony - Uncollected | | | |
| Application Season/ Management (Incorporation, cover crops, etc.) | Grazing anytime with nutrient uptake during growing season | | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | |
| | 0.20 | | | |
| P Index Application Method | | | | |
| N Balanced Manure Rate (ton or gal/A) | 23 tons/A | | | |
| P Removal Balance Manure Rate (ton or gal/A; if required by P Index) | 0 tons/A | | | |
| | Crop P Removal (lb/A) 0.0 | | | |
| P Index Value | 0.88 tons/A | | | |
| Planned Manure Rate (ton or gal/A) | 0.88 tons/A | | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 2 | 4 | 8 | |
| Nutrient Balance after Manure | 53 | -77 | -44 | |
| Supplemental Fertilizer (lb/A) | 53 | 0 | 0 | |
| P Index Application Method | | | | |
| Final Nutrient Balance (lb/A) | 0 | -77 | -44 | |
| Multiple Application | Multiple Final | | | |
| Manure Utilized on CMU | 2 tons | | | |

Appendix 5 - P Index

No P Index Part B fields in this Plan

[Go to NMP Index](#)

Crop Yrs. 2019

Pennsylvania P Index Version 2

[Go to App 4 Input](#)

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | CMU/Field ID |
|--|---|--|---|---|---|--|
| Is the CMU in a Special Protection watershed? | | Is the CMU in a Special Protection watershed? | | | | If the answer is Yes to any of these questions, Part B must be used. |
| A significant farm management change as defined by Act 38? | | Is there a significant farm management change as defined by Act 38? | | | | |
| Soil Test Mehlich 3 P greater than 200 ppm P? | | Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) | | | | |
| Contributing Distance from CMU to receiving water <150 ft.? | | Is the Contributing Distance from this CMU to receiving water less than 150 ft.? | | | | |
| Is winter manure application planned for this field? | | Is winter manure application planned for this field? | | | | |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | | | | | Fertilizer P (lb P2O5/acre) |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | |
| SUPPLEMENTAL P FERTILIZER | | | | | | Fertilizer P (lb P2O5/acre) |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | |
| MANURE P RATE | | | | | | Manure P (lb P2O5/acre) |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | |
| P SOURCE COEFFICIENT ³ | | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | |
| Source Factor Sum | | | | | | |
| PART B: TRANSPORT FACTORS | | Soil Loss (ton/acre/yr) | | | | |
| EROSION | | | | | | |
| RUNOFF POTENTIAL | 0 Drainage Class is Excessively | 2 Drainage Class is Somewhat Excessively | 4 Drainage Class is Well/Moderately Well | 6 Drainage Class is Somewhat Poorly | 8 Drainage Class is Poorly/Very Poorly | |
| SUBSURFACE DRAINAGE | 0 None | 1 Random | 2 ¹ Patterned | | | |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | |
| MODIFIED CONNECTIVITY | | 0.65 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | |
| Transport Sum x Modified Connectivity / 24 | | | | | | |
| P Index Value = 2 x Source x Transport | | | | | | |
| Low: 59 or less Nitrogen based management | | Medium: 60 to 79 Nitrogen based management | | High: 80 to 99 Phosphorus limited to crop removal | | Very High: 100 or greater No Phosphorus applied |

1 OR rapidly permeable soil near a stream

2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an 'E'.

Appendix 5 - P Index

Crop Yrs. 2020

No P Index Part B fields in this Plan

Pennsylvania P Index Version 2

[Go to NMP Index](#)

[Go to App 4 Input](#)

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | CMU/Field ID |
|--|---|--|---|---|---|--|
| Is the CMU in a Special Protection watershed? A significant farm management change as defined by Act 38? Soil Test Mehlich 3 P greater than 200 ppm P? Contributing Distance from CMU to receiving water <150 ft? Is winter manure application planned for this field? | | Is the CMU in a Special Protection watershed? Is there a significant farm management change as defined by Act 38? Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) Is the Contributing Distance from this CMU to receiving water less than 150 ft? Is winter manure application planned for this field? | | | | If the answer is Yes to any of these questions, Part B must be used. |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | |
| Soil Test Rating = 0.20 ¹ Mehlich 3 Soil Test P (ppm P) | | | | | | |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | | | | | |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | Fertilizer P (lb P2O5/acre) |
| SUPPLEMENTAL P FERTILIZER | | | | | | |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | Fertilizer P (lb P2O5/acre) |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | |
| MANURE P RATE | | | | | | |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | Manure P (lb P2O5/acre) |
| P SOURCE COEFFICIENT ³ | | | | | | |
| Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | | |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | |
| Source Factor Sum | | | | | | |
| PART B: TRANSPORT FACTORS | | Soil Loss (ton/acre/yr) | | | | |
| EROSION | | | | | | |
| RUNOFF POTENTIAL | 0 Drainage Class is Excessively | 2 Drainage Class is Somewhat Excessively | 4 Drainage Class is Well/Moderately Well | 6 Drainage Class is Somewhat Poorly | 8 Drainage Class is Poorly/Very Poorly | |
| SUBSURFACE DRAINAGE | 0 None | 1 Random | 2 ¹ Patterned | | | |
| CONTRIBUTING DISTANCE | 0 > 500 ft | 2 350 to 500 ft | 4 200 to 349 ft | 6 100 to 199 ft OR < 100 ft with 35 ft buffer | 8 ² < 100 ft | |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | |
| MODIFIED CONNECTIVITY | | | | | | |
| 0.65 50 ft Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | |
| Transport Sum x Modified Connectivity / 24 | | | | | | |
| P Index Value = 2 x Source x Transport | | | | | | |
| Low: 59 or less Nitrogen based management | | Medium: 60 to 79 Phosphorus based management | | High: 80 to 99 Phosphorus limited to crop removal | | |
| | | | | Very High: 100 or greater No Phosphorus applied | | |

1 OR rapidly permeable soil near a stream

2 "g" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Appendix 5 - P Index

No P Index Part B fields in this Plan

[Go to NMP Index](#)

Crop Yrs. 2021

Pennsylvania P Index Version 2

[Go to App 4 Input](#)

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | CMU/Field ID |
|---|---|--|---|---|---|--|
| Is the CMU in a Special Protection watershed? | | Is the CMU in a Special Protection watershed? | | | | If the answer is Yes to any of these questions, Part B must be used. |
| A significant farm management change as defined by Act 38? | | Is there a significant farm management change as defined by Act 38? | | | | |
| Soil Test Mehlich 3 P greater than 200 ppm P? | | Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) | | | | |
| Contributing Distance from CMU to receiving water <150 ft.? Is winter manure application planned for this field? | | Is the Contributing Distance from this CMU to receiving water less than 150 ft.? Is winter manure application planned for this field? | | | | |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | | | | | Fertilizer P (lb P2O5/acre) |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | |
| SUPPLEMENTAL P FERTILIZER | | | | | | Fertilizer P (lb P2O5/acre) |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | |
| MANURE P RATE | | | | | | Manure P (lb P2O5/acre) |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | |
| P SOURCE COEFFICIENT ³ | | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | |
| Source Factor Sum | | | | | | |
| PART B: TRANSPORT FACTORS EROSION | | Soil Loss (ton/acre/yr) | | | | |
| RUNOFF POTENTIAL | 0 Drainage Class is Excessively | 2 Drainage Class is Somewhat Excessively | 4 Drainage Class is Well/Moderately Well | 6 Drainage Class is Somewhat Poorly | 8 Drainage Class is Poorly/Very Poorly | |
| SUBSURFACE DRAINAGE | 0 None | 1 Random | 2 Patterned | | | |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | |
| MODIFIED CONNECTIVITY | | 0.65 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | | 1.1 Direct Connection APPLIES TO DIST > 100 FT |
| Transport Sum x Modified Connectivity / 24 | | | | | | |
| P Index Value = 2 x Source x Transport | | | | | | |
| Low: 59 or less Nitrogen based management | | Medium: 60 to 70 Nitrogen based management | | High: 80 to 99 Phosphorus limited to crop removal | | Very High: 100 or greater No Phosphorus applied |

1 OR rapidly permeable soil near a stream

2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Appendix 6
Manure Management

Date of Site Evaluation: September 25, 2018

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated.

The following areas were evaluated: veal barn, concrete manure storage tank, mortality compost pile, horse barn, pastures, horse manure temporary stacking area, farmstead

Identification of Inadequate Manure Management Practices and Conditions

List of each specific inadequate manure management practice or condition identified.

The manure gutter gravity transfer was overflowing with manure at the time of the site visit due to excessive rain and a lack of importing acres for manure application causing manure to fill the storage tank past its freeboard requirement. Veal manure was pooling outside the southwestern side of the veal barn due to the over flow. The fence around the top of the concrete manure storage tank has rusted. There were holes in several locations in the fence.

BMPs to Address Manure Management Problem Areas

List of specific BMPs (including PA Technical Guide standard name and number) and management changes that will be implemented to address each of the inadequate practices listed above.

Mr. Stoltzfus changed the management of the manure storage by obtaining a new manure importer that is able to take veal manure in the spring and fall on a consistent basis. The new manure importer is included in Appendix 8 of this plan. New fence (382) will be installed around the top of the manure storage tank.

Appendix 7
Stormwater Control

Date of Site Evaluation: September 25, 2018

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated.

The following areas were evaluated: hay field 1, pasture fields 2 and 3

Identification of Critical Runoff Problem Areas

List of each specific critical runoff problem area identified.

No critical runoff problem areas were identified at the time of the site visit.

BMPs to Address Critical Runoff Problem Areas

List of BMPs (including PA Technical Guide standard name and number) and specific management changes that will be implemented to address each of the critical runoff problem areas listed above.

None

Appendix 8

Importer/Broker Agreements & NBSs

Nutrient Balance Sheets are not required for importers that have an approved Nutrient Management Plan.

Exporter/Importer Agreement Manure Used For Agricultural Land Application

Developed consistent with the PA Nutrient and Odor Management Act Program

- 1) This agreement is entered into on September 25, 2018, by Samuel Stoltzfus (the “exporter”) who will supply manure, and Stoltzfus Farms (the “importer”), who will receive the manure from the exporter.
- 2) The purpose of this agreement is to set forth the mutual responsibilities and understanding of the parties with respect to the export of manure from the exporter to the importer.
- 3) The exporter is located at (county, twp, and address): Northumberland County, Delaware Township
16221 SR405, Watsonstown, PA 17777
- 4) The exporter will, as the supply of manure allows, provide the following amounts of manure during the seasons outlined below:

Tons of N/A (species) manure, per season:

Spring 0 tons Summer 0 tons Fall 0 tons Winter 0 tons

Gallons of Veal manure, per season:

Spring up to 101,600 gal Summer 0 gal and Fall up to 101,600 gal Winter 0 gal

Total planned manure exported: (supply of manure may be less than what is planned)

Tons of N/A (species) manure: 0 tons

Gallons of Veal manure: up to a total of 203,200 gallons per year

If multi-species are planned, please add additional lines:

- 5) The importer's location and other relevant information as it relates to this manure export, is as follows (maps indicating the location of importing fields must be attached to the supporting Nutrient Balance Sheets if manure is to be land applied at the importing site):
 - a) Phone number: 570-713-5929
 - b) County(s): Union County
 - c) Address: 1535 Col. John Kelly Road, Lewisburg, PA 17837
 - d) Township(s): Kelly Township
 - d) Owner(s) of the property receiving manure: Elvin Stoltzfus
 - e) Total cropland acres managed by the importer: 2,500 acres
 - f) Number and type of animals raised by the importer: 5 horses, 2 donkeys, 1 sheep
 - g) Number of acres available for this imported manure: 25.4 acres
 - h) Other manures (type, amount) imported to the site AND/OR utilized on the site: (Note- this would include manure that is generated on the site by the importers animals, etc.) None
 - If other manure is generated, imported and/or utilized, is it applied to the same acres as indicated in item “g” above (relating to “acres available”): N/A
 - If other manure is generated, imported and/or utilized, is it applied during the same season as the imported manure: N/A

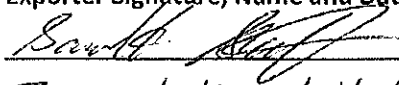
- 6) The exporter will use a Manure Export Sheet to record all manure exported to the importer. These Manure Export Sheets are available from the county conservation district or the State Conservation Commission. Computer generated forms other than the manure export sheet may be used if they contain the same information as, and are reasonably similar in format to, the forms available from the State Conservation Commission or the conservation district.
- 7) Records relating to the export of manure shall be prepared by the exporter in accordance with the following requirements of the Nutrient and Odor Management Act regulations:
 - a) A Manure Export Sheet shall be used to document all manure exports for their records
 - A copy of the Manure Export Sheet shall be provided to the importer
 - A copy of the Manure Export Sheet shall be retained on site by the exporter
 - b) When the exporter (or someone working for, or contracted by the exporter) applies the exported manure, the exporter shall maintain the following exported manure records:
 - Application dates, areas, rates and methods
 - c) Records shall be maintained by the exporter for a minimum of 3 years
 - d) A manure export informational packet (as supplied by the conservation district or State Conservation Commission) shall be provided to the importer by the time of the manure export. This information only needs to be provided once to the importer.

The manure export informational packet must include the following:

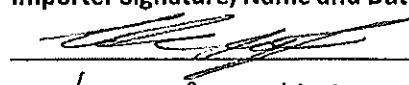
 - i. Exported Manure Informational Packet Guidance Sheet
 - ii. Nutrient Management Planning an Overview (Agronomy Facts 60)
 - iii. Manure Management for Environmental Protection
 - iv. Land Application of Manure- A supplement to the Manure Management Manual Plan Guidance
 - v. Manure Export Sheet
 - vi. Manure Transfer Summary Sheets
 - vii. Manure Field Stacking Requirements Fact Sheet
- 8) Where applicable, the importer shall properly store manure received from the exporter in accordance with the provisions of the Manure Management Manual and the Pa Technical Guide and shall not cause contamination of surface or ground water. This shall include manure stacked in application fields which may not be retained in fields for > 120 days unless covered or otherwise protected .
- 9) Manure received by the importer shall be applied to the land at the rate(s) and method(s) provided in the attached "Nutrient Balance Sheet(s)", or in accordance with a Nutrient Management Plan approved for the importing operation. If the importer wishes to change the lands used for imported manure, the nutrient balance sheet must be revised to reflect the changes and be submitted to the conservation district or State Conservation Commission (and DEP if the exporter is a CAFO) prior to implementing the changes.
- 10) The importer shall comply with applicable manure application setbacks for the imported manure, as outlined in the Nutrient Balance Sheet map(s).
- 11) For any lands not owned by the importer where the manure will be applied (i.e., rented lands), the importer hereby confirms that the importer has the authority to apply manure on those lands.

12) This agreement shall remain in full effect unless terminated by either party upon thirty days prior written notice to the other party. If this agreement is terminated, the exporter shall notify the county conservation district office that approved their nutrient management plan, of the termination.

Exporter Signature, Name and Date

 (signature)
Samuel K. Stoltzfus (name)
9-25-18 (date)

Importer Signature, Name and Date

 (signature)
Logan D. Stoltzfus (name)
9-25-18 (date)

Nutrient Balance Sheet

Prepared for

Stoltzfus Farms
1535 Col. John Kelly Road
Lewisburg, PA 17837
570-713-5929

Prepared by

Todd C. Rush
#988-NMC
120 Lake Street, Ephrata PA 17522
717-721-6795



A handwritten signature in black ink, appearing to read "TCR", is written over a horizontal line.

Nutrient Management Specialist or Broker 2 Signature

Date of Development

October 3, 2018

Exporter Information

Samuel Stoltzfus
16221 SR405, Watsonstown, PA 17777
570-538-9525

County of Origin

Northumberland County

Nutrient Balance Worksheet Appendices

The following appendices need to accompany the Nutrient Balance Worksheets if applicable:

- Maps of fields where manure is to be applied including required manure application setbacks.
- Completed P-Index spreadsheet and Winter Matrix for each crop management unit (if using Manure Plan Basis: Option 3)

Nutrient Balance Sheet Summary

Importing Farm: Stoltzfus Farms

Whole Farm Note: None

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | | |
|--------------------------|-------------|-------|--------------------------|--------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|--|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | |
| Corn Grain Fall & Spring | DB01W, DB02 | 25.4 | Corn for Grain (No-till) | Veal Manure | Early Fall | Early Fall, Summer Utilization with no cover crop. All methods of incorporation | 4000 gal/A | 0 | 0 | 0 | | | | | | | |
| Corn Grain Fall & Spring | DB01W, DB02 | 25.4 | Corn for Grain (No-till) | Veal Manure | Spring | Spring, Spring or summer Utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 62 | 0 | 0 | 0 | -360 | -74 | |
| Soybeans Fall & Spring | DB01W, DB02 | 25.4 | Soybeans with Manure | Veal Manure | Late Fall | Late Fall, Summer Utilization, Single crop corn or annuals-No cover crop | 4000 gal/A | 0 | 0 | 0 | | | | | | | |
| Soybeans Fall & Spring | DB01W, DB02 | 25.4 | Soybeans with Manure | Veal Manure | Spring | Spring, Spring or summer Utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -375 | -43 | |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NBS Summary Notes

Importing Farm: Stotzkus Farms

| CMUFieldID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|--------------------------|-----------------------|--------------|--------------------------------------|--|---|
| Corn Grain Fall & Spring | Corn for Grain (No-t) | Veal Manure | Planned rate can be applied annually | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported veal manure within 100 feet of water wells or 150 feet of surface water. Imported veal manure may only be applied at the planned rate per acre in the fall and spring each crop year. Do not apply other manures to the same fields as imported veal manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall veal manure application |
| Corn Grain Fall & Spring | Corn for Grain (No-t) | Veal Manure | Planned rate can be applied annually | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported veal manure within 100 feet of water wells or 150 feet of surface water. Imported veal manure may only be applied at the planned rate per acre in the fall and spring each crop year. Do not apply other manures to the same fields as imported veal manure in the same crop year. |
| Soybeans Fall & Spring | Soybeans with Manure | Veal Manure | Planned rate can be applied annually | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported veal manure within 100 feet of water wells or 150 feet of surface water. Imported veal manure may only be applied at the planned rate per acre in the fall and spring each crop year. Do not apply other manures to the same fields as imported veal manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall veal manure application |
| Soybeans Fall & Spring | Soybeans with Manure | Veal Manure | Planned rate can be applied annually | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported veal manure within 100 feet of water wells or 150 feet of surface water. Imported veal manure may only be applied at the planned rate per acre in the fall and spring each crop year. Do not apply other manures to the same fields as imported veal manure in the same crop year. |

Manure Group Information

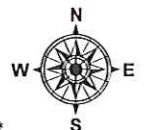
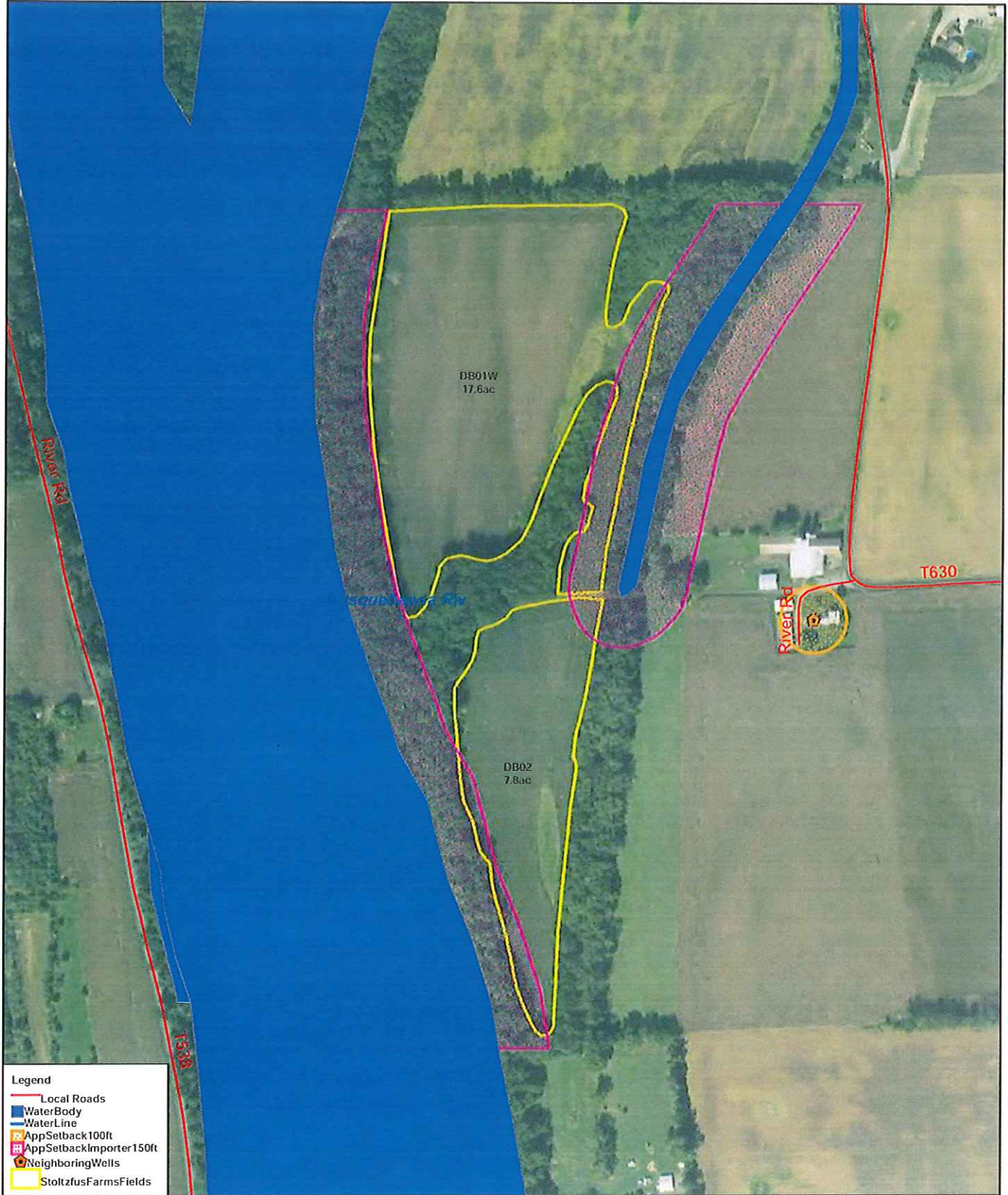
| | |
|---|-------------------------|
| Appendix 3 Manure Group Information | Veal Manure |
| Manure Report Date (note if averaging several reports) | October 1, 2018 |
| Laboratory Name | Spectrum Analytic, Inc. |
| Manure Type | Other |
| Manure Unit (lbs/ton or 1000 gal) | lb/1000 gal |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 24.03 |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 16.60 |
| Total Organic N (lbs/ton or 1000 gal) | 7.48 |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 54.97 |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 16.87 |
| Percent Solids | 4.17 |
| PSC Value (analytical or book value) | 0.87 |

| Nutrient Balance Sheets | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|--|--|--------|--|--|
| Corn Grain Fall & Spring | | | Corn Grain Fall & Spring | | | Soybeans Fall & Spring | | | Soybeans Fall & Spring | | | | | | | | | | | |
| Crop Group Identification | | | | | | | | | | | | | | | | | | | | |
| Fields | | | DB01W, DB02 | | | DB01W, DB02 | | | DB01W, DB02 | | | | | | | | | | | |
| Acres | | | 25.4 | | | 25.4 | | | 25.4 | | | | | | | | | | | |
| NBS Option | | | | | | | | | | | | | | | | | | | | |
| Option 2 Nitrogen Requirement | | | Option 2 Nitrogen Requirement | | | Option 2 Nitrogen Requirement | | | Option 2 Nitrogen Requirement | | | | | | | | | | | |
| P Banking | | | | | | | | | | | | | | | | | | | | |
| Vehicle 3 Soil Test P | | | ppm P | | | ppm P | | | ppm P | | | | | | | | | | | |
| For Option 2 enter maximum Soil Test | | | 165 | | | 166 | | | 166 | | | | | | | | | | | |
| For Option 3 enter soil test for PI | | | | | | | | | | | | | | | | | | | | |
| P Index Part A Evaluation | | | | | | | | | | | | | | | | | | | | |
| Part A Result | | | P Index not Required | | | P Index not Required | | | P Index not Required | | | | | | | | | | | |
| Crop | | | Corn for Grain (No-till) | | | Corn for Grain (No-till) | | | Soybeans with Manure | | | | | | | | | | | |
| Planned Yield | | | 200 bu/A | | | 200 bu/A | | | 65 bu/A | | | | | | | | | | | |
| Crop Removal Recommendations (lb/A) | | | | | | | | | | | | | | | | | | | | |
| N | | | P205 | | | K20 | | | N | | | P205 | | | K20 | | | | | |
| 200 | | | 60 | | | 60 | | | 200 | | | 65 | | | 91 | | | | | |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) | | | 0 | | | 0 | | | 0 | | | 0 | | | | | | | | |
| (Nutrients applied regardless of manure) | | | | | | | | | | | | | | | | | | | | |
| P Index Application Method | | | | | | | | | | | | | | | | | | | | |
| Double Crop Carry Over N (lb/A) | | | 0 | | | 0 | | | 0 | | | 0 | | | | | | | | |
| Manure History Description | | | | | | | | | | | | | | | | | | | | |
| Residual Manure N (lb/A) | | | 35 | | | Continuously - Summer Crop | | | 0 | | | Continuously - Summer Crop | | | | | | | | |
| Legume History Description | | | | | | | | | | | | | | | | | | | | |
| Residual Legume N (lb/A) | | | 65 | | | Soybeans, 65 bu/A | | | 0 | | | No Previous Year Legume | | | | | | | | |
| Net Nutrients Required (lb/A) | | | | | | | | | | | | | | | | | | | | |
| 100 | | | 60 | | | 60 | | | 81 | | | -140 | | | -7 | | | | | |
| Manure Group | | | | | | | | | | | | | | | | | | | | |
| Veal Manure | | | Veal Manure | | | Veal Manure | | | Veal Manure | | | | | | | | | | | |
| Units | | | | | | | | | | | | | | | | | | | | |
| lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | | | | | | | | | |
| Manure Nutrient Content | | | | | | | | | | | | | | | | | | | | |
| N | | | P205 | | | K20 | | | N | | | P205 | | | K20 | | | | | |
| (lb/ton or 1000 gal) | | | 24.03 | | | 54.97 | | | 16.87 | | | 24.03 | | | 54.97 | | | 16.87 | | |
| Application Season Management | | | | | | | | | | | | | | | | | | | | |
| (Incorporation, cover crops, etc.) | | | Early Fall, Summer utilization with no cover crop. All methods of incorporation | | | Spring, Spring or summer utilization. Incorporation after 7 days or none | | | Late Fall, Summer Utilization, Single crop corn or annuals-No cover crop | | | Spring, Spring or summer utilization. Incorporation after 7 days or none | | | | | | | | |
| Availability Factors | | | | | | | | | | | | | | | | | | | | |
| (Total N or NH4-N & Organic N) | | | Total N | | | NH4-N | | | Org. N | | | Total N | | | NH4-N | | | Org. N | | |
| 0.20 | | | | | | | | | 0.20 | | | | | | | | | | | |
| P Index Application Method | | | | | | | | | | | | | | | | | | | | |
| N Balanced Manure Rate (ton, gal/A) | | | 20,747 gal/A | | | 16,605 gal/A | | | 35,632 gal/A | | | 31,950 gal/A | | | | | | | | |
| P Removal Balance Manure Rate (ton or gal/A, if required by P Index) | | | 1,455 gal/A | | | 0 gal/A | | | 1,162 gal/A | | | 0 gal/A | | | | | | | | |
| Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 65.0 | | | Crop P Removal (lb/A) 65.0 | | | | | | | | | | | |
| P Index Value | | | | | | | | | | | | | | | | | | | | |
| Planned Manure Rate (ton or gal/A) | | | 4,000 gal/A | | | 4,000 gal/A | | | 4,000 gal/A | | | 4,000 gal/A | | | | | | | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | | | | | | | | | | | | | | | | | | | |
| 19 | | | 220 | | | 67 | | | 19 | | | 220 | | | 67 | | | | | |
| Nutrient Balance after Manure | | | | | | | | | | | | | | | | | | | | |
| 81 | | | -140 | | | -7 | | | 62 | | | -360 | | | -74 | | | | | |
| Supplemental Fertilizer (lb/A) | | | | | | | | | | | | | | | | | | | | |
| 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | | | |
| P Index Application Method | | | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | | 0 | | | -360 | | | -74 | | | 0 | | | -375 | | | -43 | | |
| Multiple Application | | | | | | | | | | | | | | | | | | | | |
| Multiple Initial | | | Multiple Final | | | Multiple Initial | | | Multiple Final | | | | | | | | | | | |
| Soil Test or Crop Removal | | | | | | | | | | | | | | | | | | | | |
| Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P205 and K20 are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | | | | | | | | | |

Appendix 1
Operation Maps

Maps (or aerial photographs) required in Nutrient Balance Sheets must identify: road and road names adjacent to and within the operation; field identification, boundaries and acreage; manure application setback areas and vegetated buffers and associated landscape features (streams and other water bodies, sinkholes, and active water wells or springs); and location of in-field manure stacking areas (including each site in stacking area rotation).

Samuel Stoltzfus Topographic Map



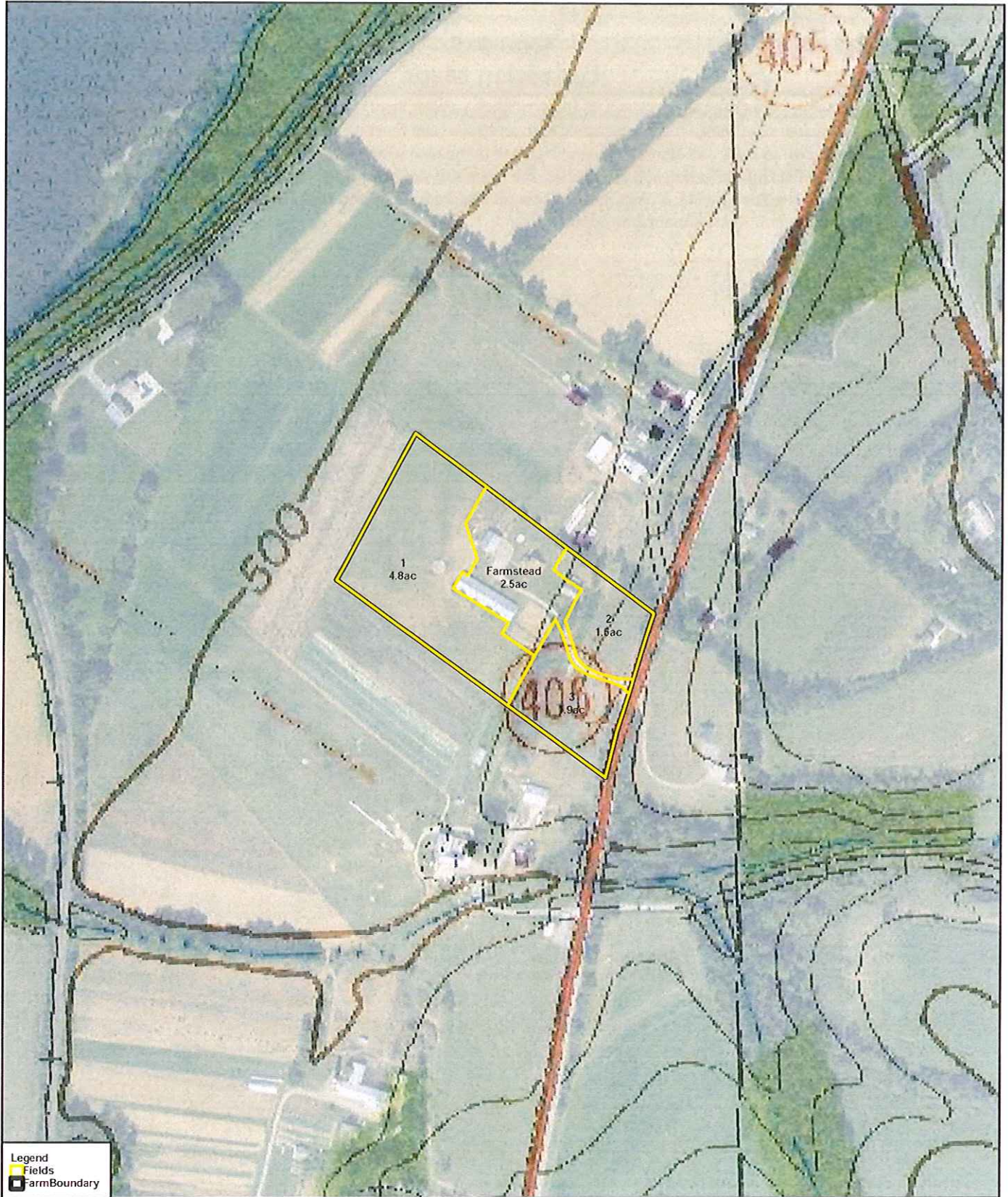
Field verification of application setbacks and buffers is required prior to land application of manure.

Appendix 9

Operation Maps

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Topographic Map and Soils Map** must be included here. The Topographic map must be drawn to scale and identify the land included in the plan with operation boundaries. The Soils Map must include the field identification and boundaries, soil types and slopes with soil legend. Adding P Index lines can be helpful on the Topographic or Soils map but are not required. The Operator Management Map must be included in the Nutrient Management Plan Summary.

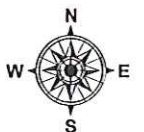
Samuel Stoltzfus Topographic Map



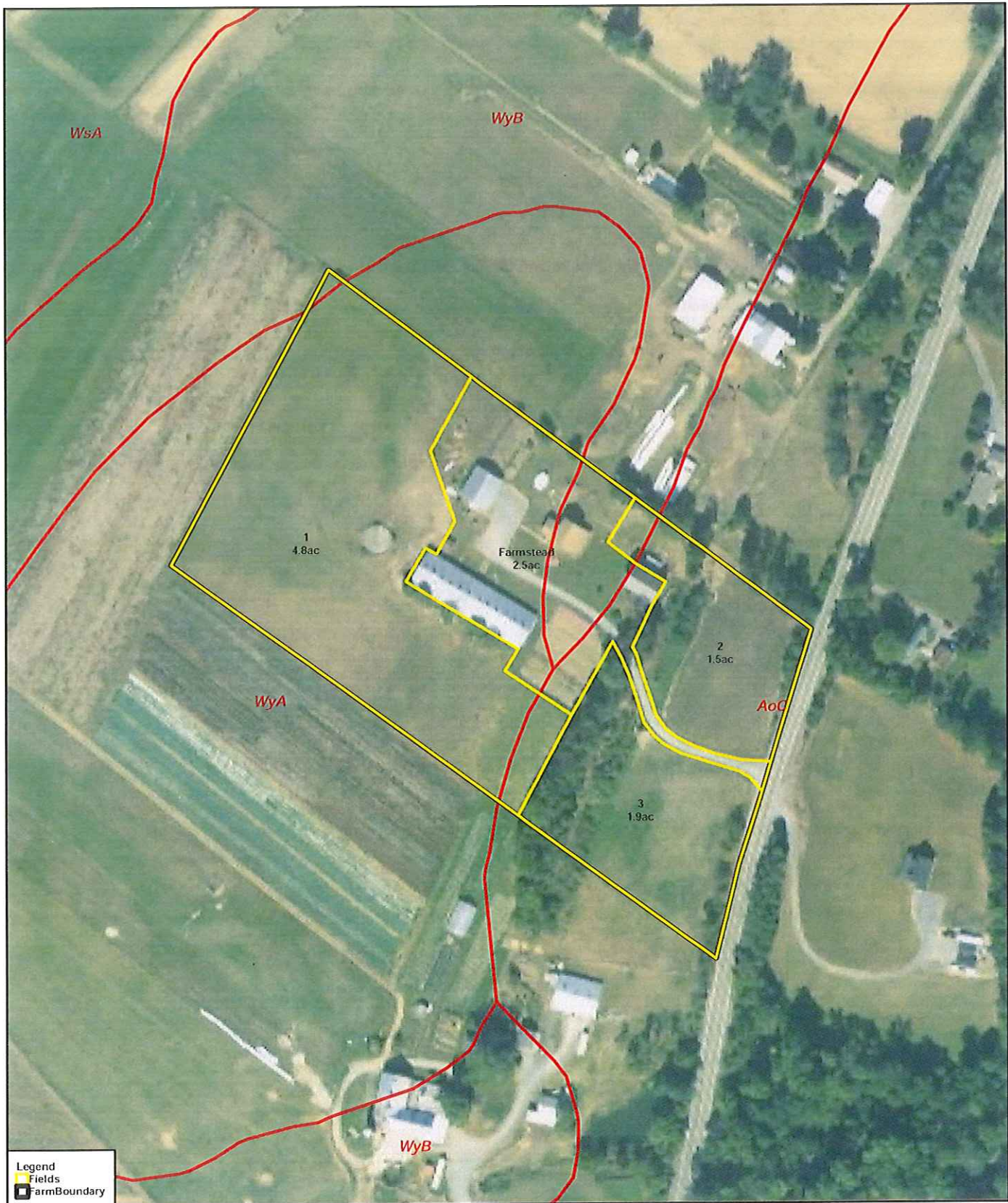
Legend
Fields
FarmBoundary

TeamAg
Incorporated

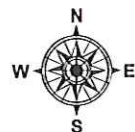
0 200 400 800 1,200 Feet



Samuel Stoltzfus Soils Map



Legend
Fields
FarmBoundary



Northumberland County Soils Legend

| | | | |
|------------|--|------------|---|
| AbB | ALBRIGHTS SILT LOAM, 3 TO 8 PERCENT SLOPES | Ilv | HOLLY SILT LOAM |
| AnA | ALLENWOOD GRAVELLY SILT LOAM, 0 TO 3 PERCENT SLOPES | Ily | HOLLY SILT LOAM, PONDED |
| AnD | ALLENWOOD GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES | Hz | HOLLY SILT LOAM, RARELY FLOODED |
| AOB | ALLENWOOD AND WASHINGTON SOILS, 3 TO 8 PERCENT SLOPES | KmB | KREAMER CHERTY SILT LOAM, 3 TO 8 PERCENT SLOPES |
| AOc | ALLENWOOD AND WASHINGTON SOILS, 8 TO 15 PERCENT SLOPES | KmC | KREAMER CHERTY SILT LOAM, 8 TO 15 PERCENT SLOPES |
| ArA | ALVIRA SILT LOAM, 0 TO 3 PERCENT SLOPES | LaB | LAI DIG GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES |
| ArB | ALVIRA SILT LOAM, 3 TO 8 PERCENT SLOPES | LaC | LAI DIG GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES |
| ArC | ALVIRA SILT LOAM, 8 TO 15 PERCENT SLOPES | LbB | LAI DIG EXTREMELY STONY LOAM, 0 TO 8 PERCENT SLOPES |
| AsB | ALVIRA VERY STONY SILT LOAM, 0 TO 8 PERCENT SLOPES | LdD | LAI DIG AND MECKESVILLE EXTREMELY STONY SOILS, 8 TO 25 PERCENT SLOPES |
| Ba | BARBOUR SOILS, FREQUENTLY FLOODED | LdF | LAI DIG AND MECKESVILLE EXTREMELY STONY SOILS, STEEP |
| Bh | BARBOUR-LINDEN COMPLEX, RARELY FLOODED | LkB | LAKIN LOAMY FINE SAND, 3 TO 8 PERCENT SLOPES |
| Bc | BASHER SOILS | LkC | LAKIN LOAMY FINE SAND, 8 TO 15 PERCENT SLOPES |
| Bd | BASHER SOILS, FREQUENTLY FLOODED | LmB | LECK KILL SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES |
| BcB | BEDINGTON SILT LOAM, 3 TO 8 PERCENT SLOPES | LmC | LECK KILL SHALY SILT LOAM, 8 TO 15 PERCENT SLOPES |
| BcC | BEDINGTON SILT LOAM, 8 TO 15 PERCENT SLOPES | LmD | LECK KILL SHALY SILT LOAM, 15 TO 25 PERCENT SLOPES |
| BcD | BEDINGTON SILT LOAM, 15 TO 25 PERCENT SLOPES | Lw | LINDEN SILT LOAM |
| BkB | BERKS SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES | MkB | MECKESVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES |
| BkC | BERKS SHALY SILT LOAM, 8 TO 15 PERCENT SLOPES | MkC | MECKESVILLE SILT LOAM, 8 TO 15 PERCENT SLOPES |
| BkD | BERKS SHALY SILT LOAM, 15 TO 25 PERCENT SLOPES | MkD | MECKESVILLE SILT LOAM, 15 TO 25 PERCENT SLOPES |
| BoB | BUCHANAN GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES | MoA | MONONGAHELA SILT LOAM, 0 TO 3 PERCENT SLOPES |
| BoC | BUCHANAN GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES | MoB | MONONGAHELA SILT LOAM, 3 TO 8 PERCENT SLOPES |
| BiB | BUCHANAN VERY STONY LOAM, 0 TO 8 PERCENT SLOPES | OpB | OPEQUON SILTY CLAY LOAM, 3 TO 8 PERCENT SLOPES |
| BiD | BUCHANAN VERY STONY LOAM, 8 TO 25 PERCENT SLOPES | OpD | OPEQUON SILTY CLAY LOAM, 8 TO 25 PERCENT SLOPES |
| CaB | CALVIN-KLINESVILLE SHALY SILT LOAMS, 3 TO 8 PERCENT SLOPES | OpE | OPEQUON SILTY CLAY LOAM, 25 TO 50 PERCENT SLOPES |
| CaC | CALVIN-KLINESVILLE SHALY SILT LOAMS, 8 TO 15 PERCENT SLOPES | Pa | PITS |
| CaD | CALVIN-KLINESVILLE SHALY SILT LOAMS, 15 TO 25 PERCENT SLOPES | Qa | QUARRIES |
| DAM | DAMS | RvB | RUSHTOWN VERY SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES |
| DeB | DEKALB EXTREMELY STONY SANDY LOAM, 0 TO 8 PERCENT SLOPES | RwC | RUSHTOWN VERY SHALY SILT LOAM, 8 TO 25 PERCENT SLOPES |
| DeD | DEKALB EXTREMELY STONY SANDY LOAM, 8 TO 25 PERCENT SLOPES | ShA | SHEL MADINE SILT LOAM, 0 TO 3 PERCENT SLOPES |
| DeF | DEKALB EXTREMELY STONY SANDY LOAM, STEEP | ShB | SHEL MADINE SILT LOAM, 3 TO 8 PERCENT SLOPES |
| Du | DUMPS, MINE | SmB | SHEL MADINE VERY STONY SILT LOAM, 0 TO 8 PERCENT SLOPES |
| Dy | DYSTROCHIREPTS, BOULDERY | Uf | UDIFLUVENTS, COAL OVERWASH |
| EdB | EDOM COMPLEX, 3 TO 8 PERCENT SLOPES | Ug | UDIFLUVENTS AND FLUVAQUENTS, GRAVELLY |
| EdC | EDOM COMPLEX, 8 TO 15 PERCENT SLOPES | Uh | UDORTHERTS, SANDSTONE AND SHALE |
| EdD | EDOM COMPLEX, 15 TO 25 PERCENT SLOPES | UoB | UNADILLA SILT LOAM, 3 TO 8 PERCENT SLOPES |
| EsB | ELLIBER CHERTY SILT LOAM, 3 TO 8 PERCENT SLOPES | UoC | UNADILLA SILT LOAM, 8 TO 15 PERCENT SLOPES |
| EsC | ELLIBER CHERTY SILT LOAM, 8 TO 15 PERCENT SLOPES | UoD | UNADILLA SILT LOAM, 15 TO 25 PERCENT SLOPES |
| EsD | ELLIBER CHERTY SILT LOAM, 15 TO 25 PERCENT SLOPES | Ur | URBAN LAND |
| EhB | ELLIBER VERY CHERTY SILT LOAM, 3 TO 8 PERCENT SLOPES | W | WATER |
| EhC | ELLIBER VERY CHERTY SILT LOAM, 8 TO 15 PERCENT SLOPES | WaB | WASHINGTON SILT LOAM, WET SUBSTRATUM, 3 TO 8 PERCENT SLOPES |
| EhD | ELLIBER VERY CHERTY SILT LOAM, 15 TO 25 PERCENT SLOPES | WbA | WATSON SILT LOAM, 0 TO 3 PERCENT SLOPES |
| EhF | ELLIBER VERY CHERTY SILT LOAM, 25 TO 70 PERCENT SLOPES | WbB | WATSON SILT LOAM, 3 TO 8 PERCENT SLOPES |
| EvB | EVENDALE CHERTY SILT LOAM, 3 TO 8 PERCENT SLOPES | WbC | WATSON SILT LOAM, 8 TO 15 PERCENT SLOPES |
| HaB | HAGERSTOWN SILT LOAM, 3 TO 8 PERCENT SLOPES | WcB | WEIKERT SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES |
| HaC | HAGERSTOWN SILT LOAM, 8 TO 15 PERCENT SLOPES | WcC | WEIKERT SHALY SILT LOAM, 8 TO 15 PERCENT SLOPES |
| HaD | HAGERSTOWN SILT LOAM, 15 TO 25 PERCENT SLOPES | WcD | WEIKERT SHALY SILT LOAM, 15 TO 25 PERCENT SLOPES |
| HhB | HARTLETON CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES | Wke | WEIKERT AND KLINESVILLE SHALY SILT LOAMS, STEEP |
| HhC | HARTLETON CHANNERY SILT LOAM, 8 TO 15 PERCENT | WsA | WHEELING SOILS, 0 TO 3 PERCENT SLOPES |
| HhD | HARTLETON CHANNERY SILT LOAM, 15 TO 25 PERCENT SLOPES | WsB | WHEELING SOILS, 3 TO 8 PERCENT SLOPES |
| HuB | HAZLETON AND CLYMER EXTREMELY STONY SANDY LOAMS, 0 TO 8 PERCENT SLOPES | WSc | WHEELING SOILS, 8 TO 15 PERCENT SLOPES |
| HuD | HAZLETON AND CLYMER EXTREMELY STONY SANDY LOAMS, 8 TO 25 PERCENT SLOPES | WjA | WYOMING GRAVELLY SANDY LOAM, 0 TO 3 PERCENT SLOPES |
| HuF | HAZLETON AND CLYMER EXTREMELY STONY SANDY LOAMS, 25 TO 80 PERCENT SLOPES | WjB | WYOMING GRAVELLY SANDY LOAM, 3 TO 8 PERCENT SLOPES |

Supporting Information & Documentation

Includes if applicable the Rainfall Additions Worksheet, Winter Application Matrix, Residual N Calculation Worksheet and other supplemental worksheets included in the NMP Spreadsheet. Attach information and documentation necessary to support plan content not included elsewhere in the NMP Spreadsheet or appendices. Examples include, but are not limited to, documentation of animal weights if Agronomy Facts 54 is not used, bedding calculations, or calculations for irrigation rates.

Emergency Response Plan

If an emergency spill or leak should occur you need to take the following actions:

1) Ensure that you and other people are safe. If the spill or leak involves a public road:

- a. Contact the police for traffic control: *State Police - 911*
- b. Use flares, safety cones, etc. to warn approaching motorists

2) Stop the leak or spill:

- a. If the leak or spill occurs while emptying the storage:
 - i. Stop pumps, close valves and / or stop siphoning of manure
 - ii. Park on top of the flexible piping to pinch it closed
 - iii. If necessary, direct manure to another storage structure
 - iv. Plug holes in the impoundment, build dams to capture the leak and either pump the manure back into the storage or spread it on crop fields according to your nutrient management plan
- b. If the spill happens while on the road:
 - i. Pull off to the side of the road
 - ii. Plug the leak or otherwise stop the flow of manure from the tank
 - iii. Build a berm or dike to keep manure from flowing into streams, ditches, etc.
 - iv. Call the police for traffic control: *State Police – 911*

3) Contain and control the leak or spill:

- a. Build a containment dam to capture the manure using soil, gravel, hay bales, etc. Provide an area for the impounded manure to run into and be temporarily stored. Limit the area in contact with manure. Local individuals with excavation and manure hauling equipment are:
 - i. *Menno Reiff – 570-966-4349*
 - ii. *Small Job Excavating – 570-523-9567*
- b. Prevent manure from running into streams, ditches, waterways, etc.
- c. Use absorbent materials such as straw, hay, sawdust, animal feed or soil to soak up the manure and to limit or stop manure flow.
- d. Check for contaminated subsurface tile lines and divert manure flow from inlet structures

4) Notify the proper authorities:

Pennsylvania Department of Environmental Protection Emergency Response – 570-327-3636
Northumberland County Conservation District – 570-495-4665
PA Fish & Boat Commission Southeast Regional Office – 814-359-5250
TeamAg, Inc. Nutrient Management Specialist – 570-764-7003

- a. Make a record of the details of the spill and the actions you took to remedy the situation. Take pictures of the extent of the spill as well as your containment and cleanup practices.
- b. If a spill enters a sinkhole or otherwise has the potential to enter groundwater, notify adjacent landowners who use private wells for their water supply.

5) Clean up the leak or spill:

- a. Clean up procedures may be directed by the authorities listed above.
- b. Pick up absorbent materials you used and properly dispose of the material.
- c. Restore damaged areas if necessary.





**COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION**

DATE: October 22, 2018

TO: Karl G. Brown, Executive Secretary
State Conservation Commission

FROM: Michael J. Walker, NM Regional Coordinator
State Conservation Commission

SUBJECT: Nutrient Management Plan Review (1)
Luzerne County, Pennsylvania

Action Requested

Action on a Nutrient Management Plan for the following operation in Luzerne County:

1. Kiliti Family Farms - David Kiliti – Farm located at 62 Kiliti Road, Berwick, PA 18603 (crop year 2019, 2020 and 2021)

Background

I have completed the required review of the subject nutrient management plan listed above. Final corrections to the plan were received at the PDA Region 2 office on October 18, 2018. As of that date, the plan is considered to be in its final form. The operation is located in Luzerne County and considered to be a volunteer animal operation (VAO) under the PA Nutrient and Odor Management Act. This operation is classified as a Concentrated Animal Feeding Operation (CAFO) under DEP regulatory authority and is required to hold an approved Act 38 NMP. The Commission is the proper authority to take action on this plan, because Luzerne Conservation District is not delegated plan review and action responsibilities under the PA Nutrient and Odor Management Act Program.

A brief description of the operation, concluding with the staff recommendation, is attached. Also attached is a copy of the complete nutrient management plan for the operation.

Thank you for considering this plan for Commission action.

Farm Descriptions

Kiliti Family Farm - David Kiliti NMP, Luzerne County –David and Marilee Kiliti reside at 22 Kiliti Road, Berwick, PA and are proposing to construct a duck barn and HDPE lined earthen manure storage at their farm located at 62 Kiliti Road, Berwick, PA. The Kiliti's will maintain their existing beef herd of 20 beef steers on the operation but the existing goats, laying chickens and guinea hens will be removed prior to the construction of the duck barn. The beef animals have free access to the pasture, beef barn and run-in shed year round. Feed and water will be provided to the beef animals throughout the pasture and in the barn. All beef manure able to be collected in the barn or run-in shed will be land applied to crop fields under Kiliti's control in the spring and fall. The proposed duck operation will average 13 flocks per year of 19,500 starter ducks and 19,500 finisher ducks. Starter ducks will be kept in the starter portion of the duck barn for 17 days and then moved to the finisher portion of the duck barn for 21 additional days. Ducks will be 100% confined to the duck barn. Duck manure will be handled as a liquid and will be transferred using a scraper and gravity flow pipe system to a proposed HDPE lined earthen manure storage pond. The combined animal equivalent units (AEUs) on Kiliti agricultural operation are planned at 106.23. The operation consists of 35.9 acres of cropland of which 19 acres are typically kept in hay, 18.4 acres of pasture and 19.2 acres of farmstead. Cattle have access to a 6.7 acre wooded section of pasture, identified as field DKP2; however, these acres were not included in the AEU per acre calculation for this operation because they are not managed as cropland, hayland or pasture. The current crop rotation of owned land is one year of corn grain followed by six years of alfalfa-grass hay. Kiliti's also rent 14.3 acres (one field) which the rotation is two years of corn grain followed by one year of soybeans. The animal equivalent units per acre for the Kiliti Family Farms - David Kiliti operation equals to 1.96, classifying the operation as a volunteer animal operation under Act 38 of 2005.

A 100' x 240' x 12' HDPE lined earthen manure storage pond is proposed for the liquid duck manure with a usable capacity of 1,088,652 gallons. An incinerator is planned to be installed to handle animal mortality. The duck manure will be handled as a liquid and applied/exported in the spring and fall. A certified custom hauler is planned to be utilized to apply this liquid duck manure. Beef cattle generate approximately 147 tons of manure which all will be utilized on lands under Kiliti control. The ducks are estimated to produce approximately 1,245,529.8 gallons of manure annually. The proposed NMP includes two known exporter/importer agreement and associated nutrient balance sheets for exporting over 3,428,680 gallons of duck manure per year to the neighboring farms for crop production.

BMPs listed to be implemented on the Kiliti Family Farms include: Animal Mortality Facility, Critical Area Planting, Division, Fencing, Grassed Waterway, Heavy Use Area Protection, Lined outlets, Livestock Pipelines, Roof Runoff Structure, Spring Development, Stream Crossing, Structure for Water Controls, Underground Outlets, Waste Storage Facility, Waster Transfer, Water & Sediment Control Basin and Watering Facilities. Kiliti's are working with DEP Streambank Fencing program to exclude the beef animals from the stream. The duck barn and HDPE lines storage are planned to be installed in the Spring 2019.

Based on my review, the NMP developed for Kiliti Family Farms - David Kiliti operation meets the requirements of the PA Nutrient and Odor Management Act and Regulations, and I therefore recommend Commission approval.

Nutrient Management Plan

For Crop Year(s)

2019

2020

2021

Prepared For

Operator's Name, Mailing Address, Telephone Number(s)

Kiliti's Family Farm, LLC – David L. Kiliti, 22 Kiliti Road, Berwick, PA
18603, 570-441-3936 (David Cell)

Operation's Location Address (if different than above)

62 Kiliti Road, Berwick, PA 18603

Site Name (CAFOs)

Kiliti's Family Farm, LLC CAFO

Prepared By

Nutrient Management Specialist's Name, Address, Telephone Number(s)

Todd C. Rush
TeamAg Inc.
120 Lake Street
Ephrata, PA 17522
570-764-7003

Nutrient Management Specialist's Program Certification Number

#988-NMC

Administratively Complete Date

Plan Approval Date

Plan Update Submission Date(s)

(updates to the approved plan not requiring board action)



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Nutrient Management Plan Summary

Total acres reported in NMP Summary: 54.3

Crop Year(s) 2019

Whole Farm Note: None
 If manure runs out for any field, consult Appendix 4 of the plan for that field. The fertilizer required on any part of the field that does not receive manure can be determined from the 'Net Nutrients Required' for that field.

Operation Acres:

Total Acres: 80.2 Total Acres Available For Nutrient Application Under Operator's Control: Owned: 40 Rented: 14.3

Animal Equivalent Units: 106.23

Animal Equivalent Units Per Acre: 1.96

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | | |
|--------------|-------|---------------------------------------|--------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|--|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | |
| DK1 | 3.6 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 4000 gal/A | 0 | 0 | 0 | | | | | | | |
| DK1 | 3.6 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | | | | | | | |
| DK1 | 3.6 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Summer | Summer: Summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 18 | 0 | -246 | 0 | |
| DK2 | 2.7 | Corn for Grain (No-till) | Liquid Duck Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 6000 gal/A | 15 | 0 | 0 | | | | | | | |
| DK2 | 2.7 | Corn for Grain (No-till) | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 6000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -276 | -102 | |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------|-------|---------------------------------------|-------------------------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| DK3 | 2.4 | Corn for Grain (No-till) | Liquid Duck Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 4000 gal/A | 15 | 0 | 0 | | | | | | |
| DK3 | 2.4 | Corn for Grain (No-till) | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 60 | 0 | 0 | 0 | -184 | -58 |
| DK4 | 3.8 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 156 | 0 | -92 | 0 |
| DK5 | 2 | Corn for Grain (No-till) | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 6000 gal/A | 15 | 0 | 0 | 30 | 0 | 4 | 0 | -138 | 0 |
| DK6 | 3.2 | Corn for Grain (No-till) | Beef Finisher Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 4 tons/A | 15 | 0 | 0 | | | | | | |
| DK6 | 3.2 | Corn for Grain (No-till) | Beef Finisher Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4 tons/A | 0 | 0 | 0 | 80 | 0 | 22 | 0 | -64 | 0 |
| DK7 | 3.9 | Planting Alfalfa-Grass with Manure | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 56 | 0 | -92 | 0 |
| DKP1 | 18.4 | Established Pasture (without legume) | Beef Finishing Cattle - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing See Notes | 0 | 0 | 0 | 71 | 0 | 45 | 0 | -35 | 0 |
| EH1 | 14.3 | Corn for Grain (No-till) | Liquid Duck Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 6000 gal/A | 15 | 0 | 0 | 30 | 0 | 0 | 0 | -138 | -26 |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NMP Summary Notes

Crop Years 2019

| CMU/Field ID | Notes |
|--------------|---|
| DK1 | |
| DK1 | |
| DK1 | None |
| DK2 | |
| DK2 | None |
| DK3 | |
| DK3 | None |
| DK4 | Note mechanical manure application setback of 100 feet from water well. |
| DK5 | None |
| DK6 | |
| DK6 | None |
| DK7 | Note mechanical manure application setback of 100 feet from surface water. |
| DKP1 | This field is managed as permanent grass pasture. An average of 20 beef finisher cattle have free access to this pasture for an average of 18 hours per day year round or equivalent. Water and supplemental feed are provided in the pasture and at the cattle barn. |
| EH1 | None |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Manure Spreader Calibration Notes

1

Crop Years 2019

| Manure Application Rate | Manure Spreader Used | Spreader Settings | Tractor Used (if applicable) | Tractor Settings (speed, gear, rpm, pto, etc.) |
|-------------------------|----------------------------|-------------------|------------------------------|--|
| 3.75 tons per acre | IH 550 Box Spreader | Slow | Case 730 | 4th Gear, Half Throttle, 540 RPM |
| 4,000 gallons per acre | Commercial Applicator Used | N/A | N/A | N/A |
| 6,000 gallons per acre | Commercial Applicator Used | N/A | N/A | N/A |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 54.3

Crop Year(s) 2020

Whole Farm Note: None
 If manure runs out for any field, consult Appendix 4 of the plan for that field. The fertilizer required on any part of the field that does not receive manure can be determined from the 'Net Nutrients Required' for that field.

Operation Acres:

Total Acres: 80.2 Total Acres Available For Nutrient Application Under Operator's Control: Owned: 40 Rented: 14.3

Animal Equivalent Units: 106.23

Animal Equivalent Units Per Acre: 1.96

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | | |
|--------------|-------|---------------------------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|--|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | |
| DK1 | 3.6 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 4000 gal/A | 0 | 0 | 0 | | | | | | | |
| DK1 | 3.6 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | | | | | | | |
| DK1 | 3.6 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Summer | Summer: Summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 18 | 0 | -246 | 0 | |
| DK2 | 2.7 | Planting Alfalfa-Grass with Manure | Beef Finisher Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 4 tons/A | 0 | 0 | 0 | | | | | | | |
| DK2 | 2.7 | Planting Alfalfa-Grass with Manure | Beef Finisher Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4 tons/A | 0 | 0 | 0 | 0 | 0 | 28 | 0 | -64 | 84 | |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | | |
|--------------|-------|---------------------------------------|-------------------------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|--|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | |
| DK3 | 2.4 | Planting Alfalfa-Grass with Manure | Liquid Duck Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 4000 gal/A | 0 | 0 | 0 | | | | | | | |
| DK3 | 2.4 | Planting Alfalfa-Grass with Manure | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 82 | 0 | -184 | 0 | |
| DK4 | 3.8 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 156 | 0 | -92 | 0 | |
| DK5 | 2 | Planting Alfalfa-Grass with Manure | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 156 | 0 | -92 | 0 | |
| DK6 | 3.2 | Planting Alfalfa-Grass with Manure | Liquid Duck Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 4000 gal/A | 0 | 0 | 0 | | | | | | | |
| DK6 | 3.2 | Planting Alfalfa-Grass with Manure | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 102 | 0 | -184 | 0 | |
| DK7 | 3.9 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 56 | 0 | -92 | 0 | |
| DKP1 | 18.4 | Established Pasture (without legume) | Beef Finishing Cattle - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing See Notes | 0 | 0 | 0 | 71 | 0 | 45 | 0 | -35 | 0 | |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------|-------|--------------------------|--------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| EH1 | 14.3 | Corn for Grain (No-till) | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 6000 gal/A | 15 | 0 | 0 | 70 | 0 | 0 | 0 | -138 | -26 |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NMP Summary Notes

Crop Years 2020

| CMU/Field ID | Notes |
|--------------|---|
| DK1 | |
| DK1 | |
| DK1 | None |
| DK2 | |
| DK2 | None |
| DK3 | |
| DK3 | None |
| DK4 | Note mechanical manure application setback of 100 feet from water well. |
| DK5 | None |
| DK6 | |
| DK6 | None |
| DK7 | Note mechanical manure application setback of 100 feet from surface water. |
| DKP1 | This field is managed as permanent grass pasture. An average of 20 beef finisher cattle have free access to this pasture for an average of 18 hours per day year round or equivalent. Water and supplemental feed are provided in the pasture and at the cattle barn. |
| EH1 | None |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Manure Spreader Calibration Notes

1

Crop Years 2020

| Manure Application Rate | Manure Spreader Used | Spreader Settings | Tractor Used (if applicable) | Tractor Settings (speed, gear, rpm, pto, etc.) |
|-------------------------|----------------------------|-------------------|------------------------------|--|
| 3.75 tons per acre | IH 550 Box Spreader | Slow | Case 730 | 4th Gear, Half Throttle, 540 RPM |
| 4,000 gallons per acre | Commercial Applicator Used | N/A | N/A | N/A |
| 6,000 gallons per acre | Commercial Applicator Used | N/A | N/A | N/A |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 54.3

Crop Year(s) 2021

Whole Farm Note: None
 If manure runs out for any field, consult Appendix 4 of the plan for that field. The fertilizer required on any part of the field that does not receive manure can be determined from the 'Net Nutrients Required' for that field.

Operation Acres:

Total Acres: 80.2 Total Acres Available For Nutrient Application Under Operator's Control: Owned: 40 Rented: 14.3

Animal Equivalent Units: 106.23

Animal Equivalent Units Per Acre: 1.96

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | | |
|--------------|-------|---------------------------------------|--------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|--|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | |
| DK1 | 3.6 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 4000 gal/A | 0 | 0 | 0 | | | | | | | |
| DK1 | 3.6 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | | | | | | | |
| DK1 | 3.6 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Summer | Summer: Summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 18 | 0 | -246 | 0 | |
| DK2 | 2.7 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 4000 gal/A | 0 | 0 | 0 | | | | | | | |
| DK2 | 2.7 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | | | | | | | |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------|-------|---------------------------------------|----------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| DK2 | 2.7 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Summer | Summer: Summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 28 | 0 | -276 | 0 |
| DK3 | 2.4 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 4000 gal/A | 0 | 0 | 0 | | | | | | |
| DK3 | 2.4 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 82 | 0 | -184 | 0 |
| DK4 | 3.8 | Established Alfalfa Grass with Manure | Beef Finisher Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 4 tons/A | 0 | 0 | 0 | | | | | | |
| DK4 | 3.8 | Established Alfalfa Grass with Manure | Beef Finisher Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4 tons/A | 0 | 0 | 0 | 0 | 0 | 112 | 0 | -64 | 0 |
| DK5 | 2 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 156 | 0 | -92 | 0 |
| DK6 | 3.2 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 4000 gal/A | 0 | 0 | 0 | | | | | | |
| DK6 | 3.2 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 102 | 0 | -184 | 0 |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------|-------|---------------------------------------|-------------------------------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| DK7 | 3.9 | Established Alfalfa Grass with Manure | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 4000 gal/A | 0 | 0 | 0 | 0 | 0 | 56 | 0 | -92 | 0 |
| DKP1 | 18.4 | Established Pasture (without legume) | Beef Finishing Cattle - Uncollected | Grazing | Grazing anytime with nutrient uptake during growing season | Grazing See Notes | 0 | 0 | 0 | 71 | 0 | 45 | 0 | -35 | 0 |
| EH1 | 14.3 | Soybeans with Manure | Liquid Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 6000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -138 | -16 |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NMP Summary Notes

Crop Years 2021

| CMU/Field ID | Notes |
|--------------|---|
| DK1 | |
| DK1 | |
| DK1 | None |
| DK2 | |
| DK2 | |
| DK2 | None |
| DK3 | |
| DK3 | None |
| DK4 | |
| DK4 | Note mechanical manure application setback of 100 feet from water well. |
| DK5 | None |
| DK6 | |
| DK6 | None |
| DK7 | Note mechanical manure application setback of 100 feet from surface water. |
| DKP1 | This field is managed as permanent grass pasture. An average of 20 beef finisher cattle have free access to this pasture for an average of 18 hours per day year round or equivalent. Water and supplemental feed are provided in the pasture and at the cattle barn. |
| EH1 | None |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Manure Spreader Calibration Notes

1

Crop Years 2021

| Manure Application Rate | Manure Spreader Used | Spreader Settings | Tractor Used (if applicable) | Tractor Settings (speed, gear, rpm, pto, etc.) |
|-------------------------|----------------------------|-------------------|------------------------------|--|
| 3.75 tons per acre | IH 550 Box Spreader | Slow | Case 730 | 4th Gear, Half Throttle, 540 RPM |
| 4,000 gallons per acre | Commercial Applicator Used | N/A | N/A | N/A |
| 6,000 gallons per acre | Commercial Applicator Used | N/A | N/A | N/A |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Additional Nutrient Management Plan Requirements

Manure Management and Stormwater BMP Implementation Summary

| Best Management Practice | NRCS Practice Code ¹ | BMP Location | Implementation Season & Year |
|--------------------------------|---------------------------------|--|------------------------------|
| Animal Mortality Facility | 316 | South of proposed duck barn | Summer / 2019 |
| Critical Area Planting | 342 | Areas disturbed by construction activities | Fall / 2019 |
| Diversion | 362 | South of field DK4 | Fall / 2019 |
| Fence | 382 | Streambank in pasture DKP1 | Fall / 2018 |
| Grassed Waterway / Swale | 412 | Upslope of duck barn, manure storage & stormwater basins | Summer / 2019 |
| Heavy Use Area Protection | 561 | South side of cattle barn | Fall / 2019 |
| Lined Outlet | 468 | Swale & underground outlet pipe outlets | Summer / 2019 |
| Livestock Pipeline | 516 | Pasture DKP1 | Fall / 2018 |
| Roof Runoff Structure | 558 | South side of cattle barn roof | Fall / 2019 |
| Spring Development | 574 | Spring in pasture DKP1 | Fall / 2018 |
| Stream Crossing | 578 | Pasture DKP1 | Fall / 2018 |
| Structure for Water Control | 587 | Swale inlet pipes | Summer / 2019 |
| Structure for Water Control | 587 | Level spreader at swale outlet north of duck barn | Summer / 2019 |
| Structure for Water Control | 587 | Stormwater diversion inlet pipe | Fall / 2019 |
| Structure for Water Control | 587 | Level spreader at underground outlet pipe in field DK5 | Fall / 2019 |
| Underground Outlet | 620 | Cattle barn roof gutters to outlet | Fall / 2019 |
| Underground Outlet | 620 | Swales to stormwater basin | Summer / 2019 |
| Underground Outlet | 620 | Stormwater diversion to level spreader | Fall / 2019 |
| Waste Storage Facility | 313 | East of duck barn at Farmstead 2 | Summer / 2019 |
| Waste Transfer | 634 | Proposed duck barn to waste storage facility | Summer / 2019 |
| Water & Sediment Control Basin | 638 | West of duck barn & manure storage | Summer / 2019 |

| | | | |
|-------------------|-----|--------------|-------------|
| Watering Facility | 614 | Pasture DKP1 | Fall / 2018 |
|-------------------|-----|--------------|-------------|

1 If applicable, enter USDA-NRCS Practice Code. For other non-technical BMPs, leave blank.

In-Field Manure Stacking Procedures

Manure must be applied to the field within 120 days of stacking or the stacks must be covered. Stacks must be implemented and maintained according to sound BMPs, addressing concerns such as soil type, soil slope, shape of the pile, setbacks, and rotation of piles.

This operation does not field stack manure.

Additional CAFO Requirements

In-field stacking criteria, winter storage requirements, and other issues identified by DEP's review of the nutrient management plan.

1. No Concentrated Animal Feeding Operation (CAFO) may stack manure for greater than 14 days unless the stack is properly located and covered or otherwise stored/protected to prevent discharge to surface water during a storm event.
2. No CAFO may land apply manure within 100 ft, of a surface water or conduit to surface water (such as, but not limited to, a sink hole, tile drain inlet, or irrigation well), unless a permanent 35 ft vegetated buffer is present between the surface water or conduit to surface water. Importers utilized by the CAFO operation should use the setbacks identified in their Nutrient Management Plan or the Nutrient Balance Sheet provided by the CAFO operator. These setbacks requirements may be greater than 100 foot in some cases.
3. CAFO operators are advised to have their manure storage facilities near empty by December 15th, in order to provide as much manure storage time during winter months. This operation should have at least a minimum of 4 vertical feet or 8 feet along the slope distance from the top of the storage embankment (2.41 vertical feet of usable storage plus 1 vertical foot of freeboard plus 0.59 vertical feet for the volume of a 100 year / 24 hour storm event) of space in the 100' x 240' x 12' HDPE lined earthen manure storage pond on December 15th. This will allow for 464,516 gallons of storage over the 76 day winter period. See Appendix 10 for required winter storage volume calculations.
4. Measures taken to prevent a discharge to surface water from the storage of raw materials such as feed and supplies, is as follows: Duck feed is stored as dry feed is sealed bins. Cattle feed is stored as dry feed in buildings. Other raw materials such as chemicals or fuels are discussed in the farm's Pollution Prevention and Contingency Plan.

Proposed Manure Storage Description

Type, dimensions, volume, freeboard and location on map.

A 100' x 240' x 12' HDPE lined earthen manure storage pond is proposed for this operation to provide long term storage for liquid duck manure. The usable capacity of the storage will be 1,088,652 gallons when accounting for a 1 foot free board and the 7.09 inch / 106,066 gallon volume of a 100 year / 24 hour storm event. The total freeboard required for the storage will be 19.09 inches. The storage will be constructed at farmstead 2 to the east of the proposed duck barn. Manure will transfer by gravity from the duck barn to the storage. Upon completion, two representative manure samples must be taken directly from the manure in the structure during manure removal and submitted to a laboratory for analysis. One sample must be taken in the spring and one sample must be taken in the fall. Per Act 38 guidelines, because the manure stored in the structure is exposed to precipitation, one manure sample will be required each season that manure is removed and applied to cropland.

Description of Planned Alternative Manure Technology Practices

Type of practice, volume of manure addressed, and result of practice.

There are no alternative manure technology practices planned for this operation.

Exported Manure Summary

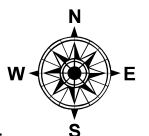
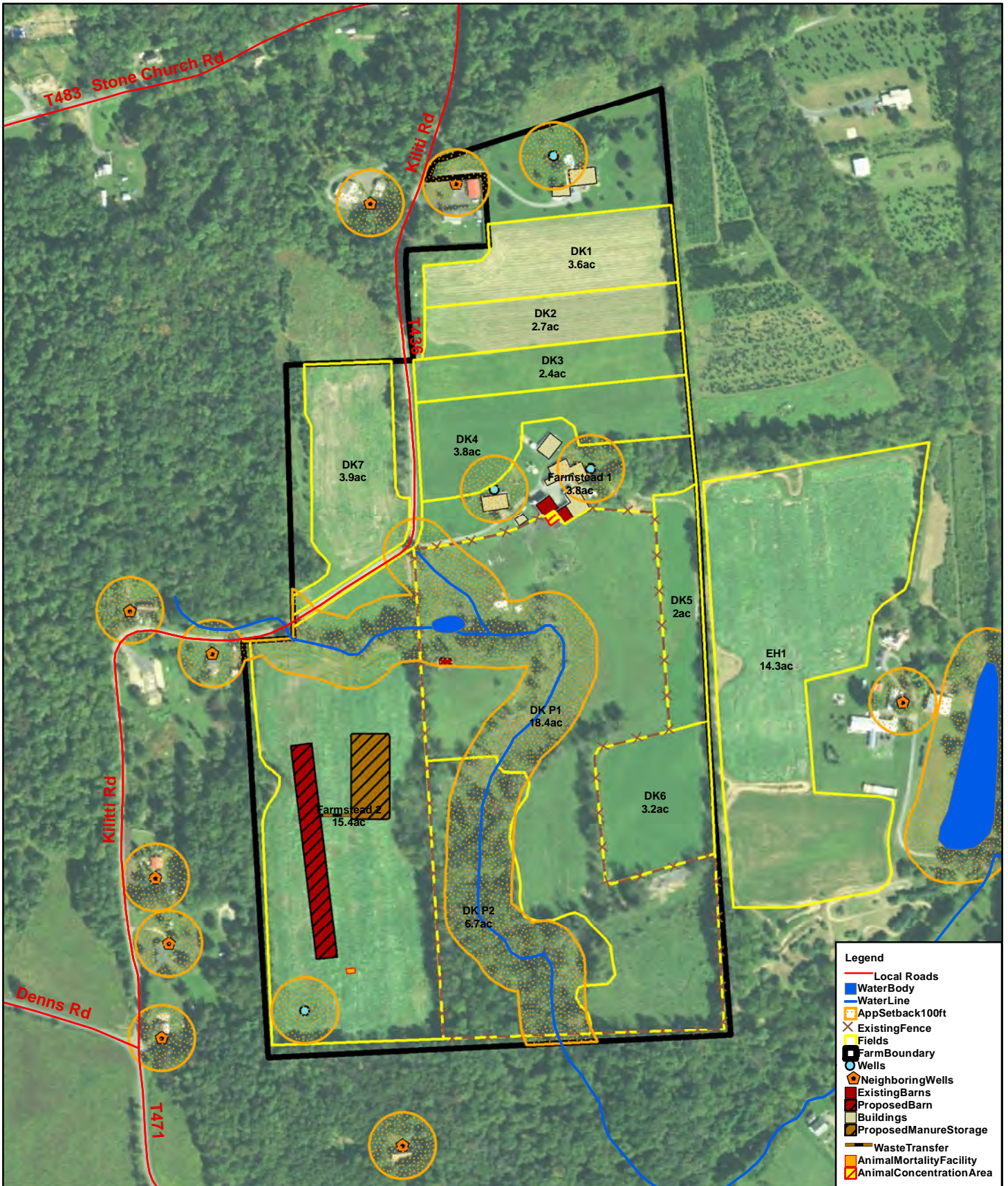
Summarize in a short paragraph the arrangements proposed for the manure to be exported from the operation. This information is described in more detail in Appendix 8 of this plan.

Excess duck manure is exported to known importers for application on crop land. See Appendix 8 for details.

Operator Management Map

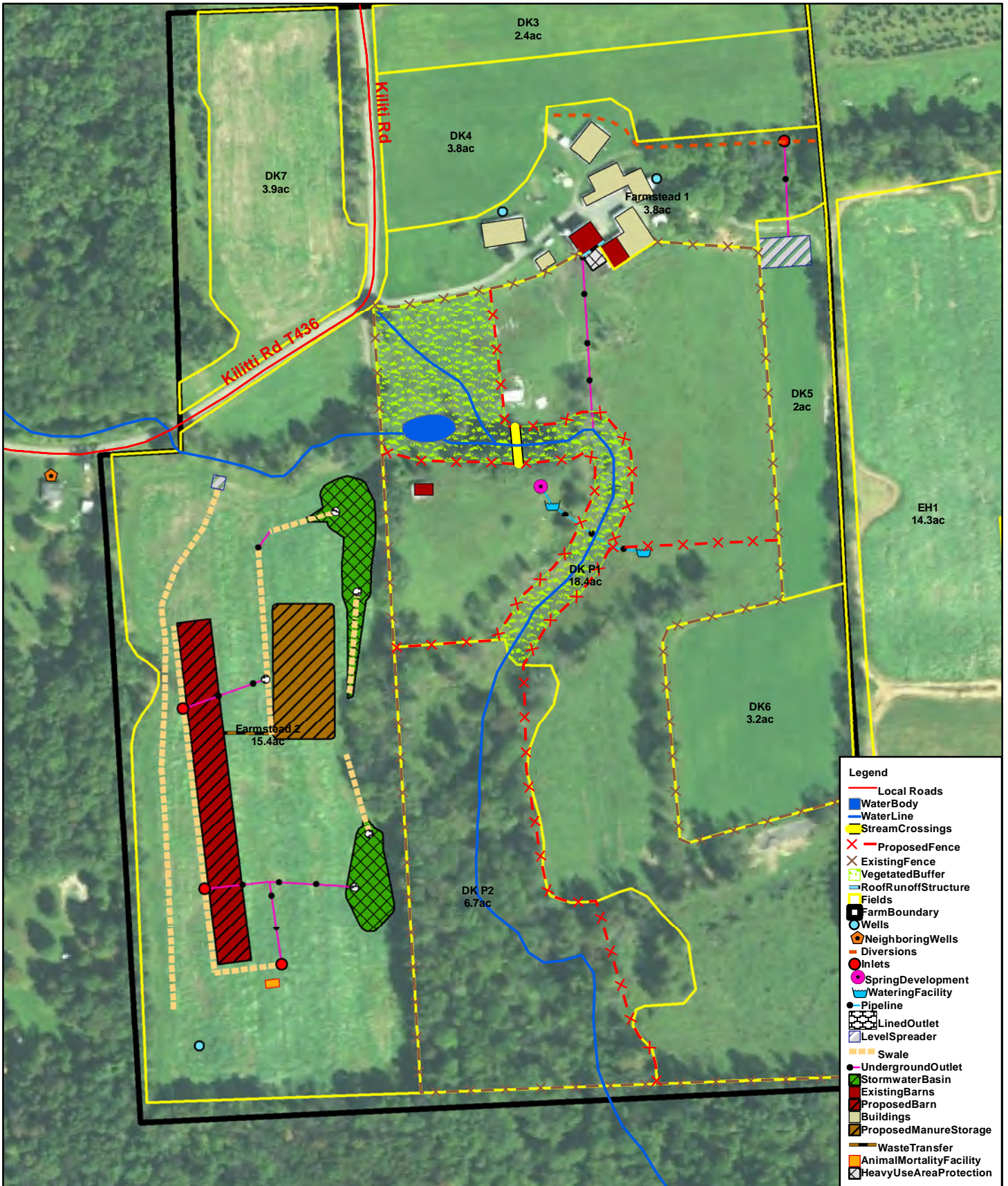
Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Operator Management Map** is to be included here in the Nutrient Management Plan Summary and must include field identification, acreage and boundaries, manure application setback areas and buffers and associated landscape features (streams and other water bodies, sinkholes and active water wells), location of existing and proposed structural BMPs (including manure storage facilities), location of existing or proposed emergency manure stacking areas and in-field manure stacking areas, and road names adjacent to and within the operation. All features on the map must be clearly identified and include a legend for setback areas and other features. The Topographic Map and Soils Map must be included in Appendix 9.

Kiliti's Family Farm, LLC Operator Management Map



****Field verification of application setbacks and buffers is required prior to land application of manure.****

Kiliti's Family Farm, LLC Farmstead & Planned Practice Map



Appendix 1

Nutrient Management Plan Agreement & Responsibilities

Plan Implementation Requirements

This nutrient management plan has been developed to meet the requirements of the following programs:

Form with checkboxes for Pennsylvania Act 38 of 2005, CAO, VAO, Pennsylvania CAFO, and Other program.

Plans developed under these programs are required to be implemented as approved in order to maintain compliance with the specific law or program.

The nutrient management plan has been developed as a: (check one)

Form with checkboxes for 1-Year Plan for Crop Year and 3-Year Plan for Crop Years with a table for years 2019, 2020, and 2021.

Records required to be maintained include the following:

- 1) Annual crop yields
2) Manure and fertilizer application rates, locations and date of application
3) Manure production figures for the various manure groups listed in your plan
4) Soil test reports (testing required every 3 years per crop management unit)
5) Manure test reports (testing required once a year for each manure group)
6) Number of animals on pasture, number of days on pasture, and hours per day on pasture
7) For operations exporting manure, Manure Export Sheets
8) BMP designs and certification for new liquid and semi-solid manure storage facilities

The following has been confirmed:

Form with checkboxes for Verification of Ag E&S Plan and Verification of Existing Site Specific Emergency Response Plan.

Verification that owners of rented/leased lands have been notified that a nutrient management plan has been developed which calls for manure to be applied to their lands and that they have no objections to the plan requirements.

Form with checkboxes for Owners Notified and No Rented/Leased Lands.

Specialist Signature

I affirm that the information contained in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, based on information provided by the operator; that this plan has been developed in accordance with the criteria established for the program(s) indicated above; and that I have presented the final complete plan to the operator and discussed the content and implementation of this plan with the operator, subject to the penalties of 18 Pa.C.S.A. § 4904, relating to unsworn falsification to authorities.

Specialist Signature and Date fields with a handwritten signature and the date 07/06/18.

Operator Signature

I understand and agree that I will implement the practices, procedures and record keeping obligations as outlined in this plan in order to protect water quality and address the nutrient needs of the crops associated with the operation. I agree that if I use a commercial hauler or broker for the application or export of manure, that only haulers or brokers that hold a valid certification issued by the Pa Department of Agriculture, under Act 49 of 2004, will be used. I affirm that all information provided in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, and reflects the current and planned activities of the operation; and that, if this plan was completed by a nutrient management specialist, I have reviewed the final completed plan and the specialist has discussed the content and implementation of this plan with me, subject to the penalties of 18 Pa.C.S.A. § 4904, relating to unsworn falsification to authorities.

Operator Signature

Paul Kiliti

Operator Title

Manager

Date

8/6/2018

Appendix 2

Operation Information

Operation Description

Animal types and numbers; cropland, hayland and pastureland acreage; farmstead acreage; crop rotation (crops, sequence of crops, and number of years for each crop); manure group management, including atypical manure (contributing animal groups, collection, storage and handling procedures); mortality composting management.

Kiliti's Family Farm, LLC operates a grain, forage and beef cattle farm in Luzerne County, PA. The operation is proposing to construct a duck barn at the operation in 2019. The operation consists of 35.9 acres of cropland of which 19 acres are typically kept in hay, 18.4 acres of pasture and 19.2 acres of farmstead. Cattle have access to a 6.7 acre wooded section of pasture, identified as field DKP2; however these acres were not included in the AEU per acre calculation for this operation because they are not managed as cropland, hayland or pasture. The operation's current crop rotation for fields DK1 through DK7 is one year of corn grain followed by six years of alfalfa-grass hay. The operation's current crop rotation for field EH1 is two years of corn grain followed by one year of soybeans. Corn and soybeans are established using no-till planting methods. Fields are moldboard plowed and disked in the spring prior to seeding hay. The cattle herd averages 20 beef finishing cattle. Cattle have free access to pasture year round from the cattle barn. Collected cattle manure is handled as a solid and accumulates in the cattle barn. Collected cattle manure is applied for corn, soybeans and hay in the spring and fall. The proposed duck operation will average 13 flocks per year of 19,500 starter ducks and 19,500 finisher ducks. Starter ducks will be kept in the starter portion of the duck barn for 17 days and then moved to the finisher portion of the duck barn for 21 additional days. Ducks will be 100% confined to the duck barn. Duck manure will be handled as a liquid and will be transferred using a scraper and gravity flow pipe system to a proposed HDPE lined earthen manure storage pond. Duck manure will be applied for corn and soybeans in the spring and fall, as well as, hay in the spring, summer and fall. Excess duck manure will be exported to known importers for application on cropland. Mortalities will be incinerated on the operation. Ashes from the incinerator will be added to the proposed HDPE lined earthen manure storage pond.

County(s)

Luzerne County / Salem Township

Name of Receiving Stream(s)/Watershed(s)

Unnamed Tributary to Walker Run – CWF

Notation of Special Protection Waters

None

Operation Acres

Total Acres: 80.2 acres

Total Acres Available for Nutrient Application Under Operator's Control

Owned: 40.0 acres

Rented: 14.3 acres

Names & Addresses of Owners of Rented or Leased Land

Edward Heller, 4210 North Market Street, Berwick, PA 18603

Existing Manure Storages & Capacity

Type of storage, dimensions, useable capacity, freeboard, top or bottom loaded, dimensions and description of contributing runoff area, description of wastewater additions, types and amounts of bedding. Briefly describe, for each manure group, manure storage management during removal (degree of agitation, method of manure removal, extent the storage is emptied, type of unremoved manure, etc.) and manure sampling procedures.

There are no manure storage structures on the operation at this time.

Manure Application Equipment Capacity & Practical Application Rates

Description of application equipment, practical application rates based on calibration and calibration method used, the data recorded during equipment calibration is to be retained on the farm. If applicable, name and Act 49 certification number of custom applicator.

The operation uses an International Harvester 550 box type manure spreader for solid cattle manure application. The spreader holds approximately 135 cubic feet or approximately 3.75 tons of manure. Based on the operator's records, the average manure application rate is 1 load or 3.75 tons per acre for this manure spreader. The operation will use a custom manure applicator to apply liquid duck manure. Kendal Weaver 227-MB1, Tri County Spreading, 5144 Snyderstown Road, Paxinos, PA 17860, 570-672-2550. The custom manure applicators equipment has been calibrated to apply manure at the rates listed in this plan.

| Appendix 3 Manure Group Information Crop Yrs. 2019 | Liquid Duck Manure | | Beef Finisher Manure | |
|--|--|-------------------|-------------------------|------------------------------------|
| Manure Report Date (note if averaging several reports) | Book Value | | April 12, 2018 | |
| Laboratory Name | PSU Agronomy Guide | | Spectrum Analytic, Inc. | |
| Manure Type | Poultry | | Other | |
| Manure Unit (lbs/ton or 1000 gal) | lb/1000 gal | | lb/ton | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 33.00 | | 12.80 | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | Complete NH ₄ -N | | 1.40 | |
| Total Organic N (lbs/ton or 1000 gal) | Check N values in Manure Avg Input Go to NMP Index | | 11.40 | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 23.00 Go to Appendix 3 Input | | 8.40 | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 16.00 Go to Manure Avg Input | | 14.40 | |
| Percent Solids | 5.00 Grazing Calculator | | 27.65 | |
| PSC Value (analytical or book value) | 0.80 | | 0.80 | |
| Percent Moisture | 95.00 | | 72.35 | |
| Manure Group AEU's | 87.23 | | 19.00 | |
| Description: Site & Season Applied | Earthen Manure Storage | Summer & Fall | Cattle Barn | Spring & Fall |
| Inventory Method | Calculated | | Records | |
| | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. |
| Manure Group Identification | Liquid Duck Manure | | Beef Finisher Manure | Beef Finisher Manure - uncollected |
| CALCULATED: Total Manure Collected Per Manure Group Units | 1,245,529.8 gallons | | | 127.4 Tons |
| RECORDS: Total Manure Collected Per Manure Group Unit | | | 19.0 tons | |
| Manure Used On-Farm Units | Collected 223,400.0 Gallons | Uncollected 0.0 | Collected 24.0 Tons | Uncollected 127.3 Tons |
| Manure Exported Units | 1,022,129.8 gallons | | 0.0 tons | |
| Manure Allocation Balance Units | 0.0 Gallons | 0.0 | -5.0 Tons | 0.1 Tons |
| Manure Balance as a Percent of Total Manure Collected | 0.0% | | -26.3% | |
| Total Rainfall and Runoff | 181,614 gallons | | 0 tons | |

| Appendix 3 Manure Group Information Crop Yrs. 2019 | Liquid Duck Manure | | Beef Finisher Manure | |
|--|------------------------------------|---|------------------------------------|---|
| | Manure Generation per Animal Group | Uncollected Manure: Nutrient Analysis Book Values | Manure Generation per Animal Group | Uncollected Manure: Nutrient Analysis Book Values |
| Animal Group 1 | Starter Duck | App 3 Input | Beef Finishing Cattle | Beef Finishing Cattle uncollected |
| Animal Type | Duck, starter: 0–17 days | | Beef Finishing: 8–24 mo. | Total Nitrogen (N) lbs/ton |
| Animal Number | 19,500 | | 20 | 14.00 |
| Animal Weight | 1.36 | | 950 | Total Phosphate (P2O5) lbs/ton |
| Animal Group AUs | 26.52 | | 19.00 | 5.00 |
| Animal Group AEUs | 16.06 | | 19.00 | Total Potash (K2O) lbs/ton |
| Daily Manure Production per AU | 13.0 | | 49.0 | 8.00 |
| Total Days Manure Produced | 221 | | 365 | PSC Value |
| Total Manure Produced | 76,192 | | | 0.80 |
| Days On Pasture | 0 | | 365 | |
| Hours Per Day On Pasture | 0 | | 18 | |
| Total Bedding | 0 | | | Grazing Calculator |
| Total Washwater | 216,667 | | | |
| CALCULATED - Total Uncollected Manure Per Animal Group | | | 127.4 | 127 - Tons |
| CALCULATED-Total Manure Collected Per Animal Group | 292,859 | | | |

| | | | | |
|--|----------------------------|-------------|--|--|
| Animal Group 2 | Finisher Duck | App 3 Input | | |
| Animal Type | Duck, finisher: 17-38 days | | | |
| Animal Number | 19500 | | | |
| Animal Weight | 4.88 | | | |
| Animal Group AUs | 95.16 | | | |
| Animal Group AEUs | 71.17 | | | |
| Daily Manure Production per AU | 13.0 | | | |
| Total Days Manure Produced | 273 | | | |
| Total Manure Produced | 337,723 | | | |
| Days On Pasture | 0 | | | |
| Hours Per Day On Pasture | 0 | | | |
| Total Bedding | 0 | | | |
| Total Washwater | 433,334 | | | |
| CALCULATED - Total Uncollected Manure Per Animal Group | | | | |
| CALCULATED-Total Manure Collected Per Animal Group | 771,057 | | | |

| Appendix 3 Manure Group Information Crop Yrs. 2020 | Liquid Duck Manure | | Beef Finisher Manure | |
|--|--|-------------------|-------------------------|------------------------------------|
| Manure Report Date (note if averaging several reports) | Book Value | | April 12, 2018 | |
| Laboratory Name | PSU Agronomy Guide | | Spectrum Analytic, Inc. | |
| Manure Type | Poultry | | Other | |
| Manure Unit (lbs/ton or 1000 gal) | lb/1000 gal | | lb/ton | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 33.00 | | 12.80 | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | Complete NH ₄ -N | | 1.40 | |
| Total Organic N (lbs/ton or 1000 gal) | Check N values in Manure Avg Input Go to NMP Index | | 11.40 | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 23.00 Go to Appendix 3 Input | | 8.40 | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 16.00 Go to Manure Avg Input | | 14.40 | |
| Percent Solids | 5.00 Grazing Calculator | | 27.65 | |
| PSC Value (analytical or book value) | 0.80 | | 0.80 | |
| Percent Moisture | 95.00 | | 72.35 | |
| Manure Group AEU's | 87.23 | | 19.00 | |
| Description: Site & Season Applied | Earthen Manure Storage | Summer & Fall | Cattle Barn | Spring & Fall |
| Inventory Method | Calculated | | Records | |
| | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. |
| Manure Group Identification | Liquid Duck Manure | | Beef Finisher Manure | Beef Finisher Manure - uncollected |
| CALCULATED: Total Manure Collected Per Manure Group Units | 1,245,529.8 gallons | | | 127.4 Tons |
| RECORDS: Total Manure Collected Per Manure Group Unit | | | 19.0 tons | |
| Manure Used On-Farm Units | Collected 212,600.0 Gallons | Uncollected 0.0 | Collected 20.3 Tons | Uncollected 127.3 Tons |
| Manure Exported Units | 1,032,929.8 gallons | | 0.0 tons | |
| Manure Allocation Balance Units | 0.0 Gallons | 0.0 | -1.3 Tons | 0.1 Tons |
| Manure Balance as a Percent of Total Manure Collected | 0.0% | | -6.6% | |
| Total Rainfall and Runoff | 181,614 gallons | | 0 tons | |

| Appendix 3 Manure Group Information Crop Yrs. 2021 | Liquid Duck Manure | | Beef Finisher Manure | |
|--|--|-------------------|-------------------------|------------------------------------|
| Manure Report Date (note if averaging several reports) | Book Value | | April 12, 2018 | |
| Laboratory Name | PSU Agronomy Guide | | Spectrum Analytic, Inc. | |
| Manure Type | Poultry | | Other | |
| Manure Unit (lbs/ton or 1000 gal) | lb/1000 gal | | lb/ton | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 33.00 | | 12.80 | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | Complete NH ₄ -N | | 1.40 | |
| Total Organic N (lbs/ton or 1000 gal) | Check N values in Manure Avg Input Go to NMP Index | | 11.40 | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 23.00 Go to Appendix 3 Input | | 8.40 | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 16.00 Go to Manure Avg Input | | 14.40 | |
| Percent Solids | 5.00 Grazing Calculator | | 27.65 | |
| PSC Value (analytical or book value) | 0.80 | | 0.80 | |
| Percent Moisture | 95.00 | | 72.35 | |
| Manure Group AEU's | 87.23 | | 19.00 | |
| Description: Site & Season Applied | Earthen Manure Storage | Summer & Fall | Cattle Barn | Spring & Fall |
| Inventory Method | Calculated | | Records | |
| | Collected Calc. | Uncollected Calc. | Collected Calc. | Uncollected Calc. |
| Manure Group Identification | Liquid Duck Manure | | Beef Finisher Manure | Beef Finisher Manure - uncollected |
| CALCULATED: Total Manure Collected Per Manure Group Units | 1,245,529.8 gallons | | | 127.4 Tons |
| RECORDS: Total Manure Collected Per Manure Group Unit | | | 19.0 tons | |
| Manure Used On-Farm Units | Collected 229,800.0 Gallons | Uncollected 0.0 | Collected 28.5 Tons | Uncollected 127.3 Tons |
| Manure Exported Units | 1,015,729.8 gallons | | 0.0 tons | |
| Manure Allocation Balance Units | 0.0 Gallons | 0.0 | -9.5 Tons | 0.1 Tons |
| Manure Balance as a Percent of Total Manure Collected | 0.0% | | -50.0% | |
| Total Rainfall and Runoff | 181,614 gallons | | 0 tons | |

| App. 4: Crop Yrs. 2019 | DK1 | | | DK1 | | | DK1 | | | DK2 | | | DK2 | | |
|--|---|----------------------------|--------|--|----------------------------|--------|---|----------------------------|--------|---|----------------------------------|--------|--|----------------------------------|--------|
| CMU/Field ID | | | | | | | | | | | | | | | |
| Acres | 3.6 | | | 3.6 | | | 3.6 | | | 2.7 | | | 2.7 | | |
| Soil Test Report Date | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH |
| | 40 | 72 | 6.5 | 40 | 72 | 6.5 | 40 | 72 | 6.5 | 55 | 62 | 6.3 | 55 | 62 | 6.3 |
| P Index Part A Evaluation | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Established Alfalfa Grass with Manure | | | Established Alfalfa Grass with Manure | | | Established Alfalfa Grass with Manure | | | Corn for Grain (No-till) | | | Corn for Grain (No-till) | | |
| Planned Yield | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 150 bu/A | | | 150 bu/A | | |
| PSU Soil Test Recommendation (lb/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 200 | 30 | 210 | 200 | 30 | 210 | 200 | 30 | 210 | 150 | 0 | 90 | 150 | 0 | 90 |
| User Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 40 | 1st yr. after alfalfa <25% stand | | 0 | 1st yr. after alfalfa <25% stand | |
| Net Nutrients Required (lb/A) | 165 | 30 | 210 | 145 | -62 | 146 | 125 | -154 | 82 | 60 | 0 | 90 | 30 | -138 | -6 |
| Manure Group | Liquid Duck Manure | | | Liquid Duck Manure | | | Liquid Duck Manure | | | Liquid Duck Manure | | | Liquid Duck Manure | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Summer: Summer utilization-Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.15 | | | 0.15 | | | 0.15 | | | 0.15 | | | 0.15 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | |
| N Balanced Manure Rate (ton; gal/A) | 33,333 gal/A | | | 29,293 gal/A | | | 25,253 gal/A | | | 12,121 gal/A | | | 6,061 gal/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 2,609 gal/A | | | 0 gal/A | | | 0 gal/A | | | 2,609 gal/A | | | 0 gal/A | | |
| | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 0.0 | | | Crop P Removal (lb/A) 0.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 0.0 | | |
| P Index Value | 65 | | | 65 | | | 65 | | | 67 | | | 67 | | |
| Planned Manure Rate (ton or gal/A) | 4000 gal/A | | | 4000 gal/A | | | 4000 gal/A | | | 6000 gal/A | | | 6000 gal/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 20 | 92 | 64 | 20 | 92 | 64 | 20 | 92 | 64 | 30 | 138 | 96 | 30 | 138 | 96 |
| Nutrient Balance after Manure | 0 | -62 | 146 | 0 | -154 | 82 | 0 | -246 | 18 | 30 | -138 | -6 | 0 | -276 | -102 |
| Supplemental Fertilizer (lb/A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | | | | | | 0 | -246 | 0 | | | | 0 | -276 | -102 |
| Multiple Application | Multiple Initial | | | Multiple | | | Multiple Final | | | Multiple Initial | | | Multiple Final | | |
| Manure Utilized on CMU | 14,400 gallons | | | 14,400 gallons | | | 14,400 gallons | | | 16,200 gallons | | | 16,200 gallons | | |

| App. 4: Crop Yrs. 2019 | DK3 | | | DK3 | | | DK4 | | | DK5 | | | DK6 | | |
|--|---|----------------------------|--------|--|----------------------------|--------|--|----------------------------|--------|--|----------------------------------|--------|---|----------------------------|--------|
| CMU/Field ID | | | | | | | | | | | | | | | |
| Acres | 2.4 | | | 2.4 | | | 3.8 | | | 2.0 | | | 3.2 | | |
| Soil Test Report Date | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH |
| | 84 | 72 | 6.5 | 84 | 72 | 6.5 | 115 | 65 | 6.8 | 172 | 56 | 6.7 | 83 | 37 | 6.5 |
| P Index Part A Evaluation | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Corn for Grain (No-till) | | | Corn for Grain (No-till) | | | Established Alfalfa Grass with Manure | | | Corn for Grain (No-till) | | | Corn for Grain (No-till) | | |
| Planned Yield | 150 bu/A | | | 150 bu/A | | | 4 ton/A | | | 150 bu/A | | | 150 bu/A | | |
| PSU Soil Test Recommendation (lb/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 150 | 0 | 70 | 150 | 0 | 70 | 200 | 0 | 220 | 150 | 0 | 100 | 150 | 0 | 130 |
| User Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 15 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 40 | 1st yr. after alfalfa <25% stand | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 100 | 0 | 70 | 80 | -92 | 6 | 165 | 0 | 220 | 60 | 0 | 100 | 100 | 0 | 130 |
| Manure Group | Liquid Duck Manure | | | Liquid Duck Manure | | | Liquid Duck Manure | | | Liquid Duck Manure | | | Beef Finisher Manure | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.15 | | | 0.15 | | | 0.15 | | | 0.15 | | | 0.20 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | |
| N Balanced Manure Rate (ton; gal/A) | 20,202 gal/A | | | 16,162 gal/A | | | 33,333 gal/A | | | 12,121 gal/A | | | 39 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 2,609 gal/A | | | 0 gal/A | | | 2,609 gal/A | | | 2,609 gal/A | | | 7 tons/A | | |
| | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 0.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 60.0 | | |
| P Index Value | 66 | | | 66 | | | 65 | | | 70 | | | 32 | | |
| Planned Manure Rate (ton or gal/A) | 4000 gal/A | | | 4000 gal/A | | | 4000 gal/A | | | 6000 gal/A | | | 3.75 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 20 | 92 | 64 | 20 | 92 | 64 | 20 | 92 | 64 | 30 | 138 | 96 | 10 | 32 | 54 |
| Nutrient Balance after Manure | 80 | -92 | 6 | 60 | -184 | -58 | 0 | -92 | 156 | 30 | -138 | 4 | 90 | -32 | 76 |
| Supplemental Fertilizer (lb/A) | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 156 | 30 | 0 | 4 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | | | 0 | -184 | -58 | 0 | -92 | 0 | 0 | -138 | 0 | | | |
| Multiple Application | Multiple Initial | | | Multiple Final | | | | | | | | | Multiple Initial | | |
| Manure Utilized on CMU | 9,600 gallons | | | 9,600 gallons | | | 15,200 gallons | | | 12,000 gallons | | | 12 tons | | |

| App. 4: Crop Yrs. 2019 | DK6 | | | DK7 | | | DKP1 | | | EH1 | | |
|--|---|----------------------------|---------------|---|----------------------------|---------------|---|----------------------------|---------------|--|----------------------------|---------------|
| CMU/Field ID | | | | | | | | | | | | |
| Acres | 3.2 | | | 3.9 | | | 18.4 | | | 14.3 | | |
| Soil Test Report Date | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH |
| | 83 | 37 | 6.5 | 129 | 131 | 6.5 | 74 | 83 | 6.0 | 129 | 77 | 6.2 |
| P Index Part A Evaluation | Farm Mgmt Change | | | Farm Mgmt Change <150ft | | | Farm Mgmt Change <150ft | | | Farm Mgmt Change | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Corn for Grain (No-till) | | | Planting Alfalfa-Grass with Manure | | | Established Pasture (without legume) | | | Corn for Grain (No-till) | | |
| Planned Yield | 150 bu/A | | | 4 ton/A | | | 2.5 ton/A | | | 150 bu/A | | |
| PSU Soil Test Recommendation (lb/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 150 | 0 | 130 | 200 | 0 | 120 | 125 | 0 | 100 | 150 | 0 | 70 |
| User Soil Test Recommendation (lb/A) | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 0 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 40 | Soybeans, 40 bu/A | |
| Net Nutrients Required (lb/A) | 90 | -32 | 76 | 165 | 0 | 120 | 90 | 0 | 100 | 60 | 0 | 70 |
| Manure Group | Beef Finisher Manure | | | Liquid Duck Manure | | | Beef Finishing Cattle - Uncollected | | | Liquid Duck Manure | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Grazing anytime with nutrient uptake during growing season | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.20 | | | 0.15 | | | 0.20 | | | 0.15 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | |
| N Balanced Manure Rate (ton; gal/A) | 35 tons/A | | | 33,333 gal/A | | | 32 tons/A | | | 12,121 gal/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3 tons/A | | | 2,609 gal/A | | | 8 tons/A | | | 2,609 gal/A | | |
| | Crop P Removal (lb/A) 28.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 37.5 | | | Crop P Removal (lb/A) 60.0 | | |
| P Index Value | 32 | | | 74 | | | 37 | | | 79 | | |
| Planned Manure Rate (ton or gal/A) | 3.75 tons/A | | | 4000 gal/A | | | 6.92 tons/A | | | 6000 gal/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 10 | 32 | 54 | 20 | 92 | 64 | 19 | 35 | 55 | 30 | 138 | 96 |
| Nutrient Balance after Manure | 80 | -64 | 22 | 0 | -92 | 56 | 71 | -35 | 45 | 30 | -138 | -26 |
| Supplemental Fertilizer (lb/A) | 80 | 0 | 22 | 0 | 0 | 56 | 71 | 0 | 45 | 30 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -64 | 0 | 0 | -92 | 0 | 0 | -35 | 0 | 0 | -138 | -26 |
| Multiple Application | Multiple Final | | | | | | | | | | | |
| Manure Utilized on CMU | 12 tons | | | 15,600 gallons | | | 127 tons | | | 85,800 gallons | | |

| App. 4: Crop Yrs. 2020 | DK1 | | | DK1 | | | DK1 | | | DK2 | | | DK2 | | |
|--|---|----------------------------|--------|--|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|--|----------------------------|--------|
| CMU/Field ID | | | | | | | | | | | | | | | |
| Acres | 3.6 | | | 3.6 | | | 3.6 | | | 2.7 | | | 2.7 | | |
| Soil Test Report Date | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH |
| | 40 | 72 | 6.5 | 40 | 72 | 6.5 | 40 | 72 | 6.5 | 55 | 62 | 6.3 | 55 | 62 | 6.3 |
| P Index Part A Evaluation | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Established Alfalfa Grass with Manure | | | Established Alfalfa Grass with Manure | | | Established Alfalfa Grass with Manure | | | Planting Alfalfa-Grass with Manure | | | Planting Alfalfa-Grass with Manure | | |
| Planned Yield | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | |
| PSU Soil Test Recommendation (lb/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 200 | 30 | 210 | 200 | 30 | 210 | 200 | 30 | 210 | 200 | 0 | 220 | 200 | 0 | 220 |
| User Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 165 | 30 | 210 | 145 | -62 | 146 | 125 | -154 | 82 | 165 | 0 | 220 | 155 | -32 | 166 |
| Manure Group | Liquid Duck Manure | | | Liquid Duck Manure | | | Liquid Duck Manure | | | Beef Finisher Manure | | | Beef Finisher Manure | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Summer: Summer utilization-Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.15 | | | 0.15 | | | 0.15 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | |
| N Balanced Manure Rate (ton; gal/A) | 33,333 gal/A | | | 29,293 gal/A | | | 25,253 gal/A | | | 65 tons/A | | | 61 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 2,609 gal/A | | | 0 gal/A | | | 0 gal/A | | | 7 tons/A | | | 3 tons/A | | |
| | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 0.0 | | | Crop P Removal (lb/A) 0.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 28.0 | | |
| P Index Value | 65 | | | 65 | | | 65 | | | 19 | | | 19 | | |
| Planned Manure Rate (ton or gal/A) | 4000 gal/A | | | 4000 gal/A | | | 4000 gal/A | | | 3.75 tons/A | | | 3.75 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 20 | 92 | 64 | 20 | 92 | 64 | 20 | 92 | 64 | 10 | 32 | 54 | 10 | 32 | 54 |
| Nutrient Balance after Manure | 0 | -62 | 146 | 0 | -154 | 82 | 0 | -246 | 18 | 0 | -32 | 166 | 0 | -64 | 112 |
| Supplemental Fertilizer (lb/A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 28 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | | | | | | 0 | -246 | 0 | | | | 0 | -64 | 84 |
| Multiple Application | Multiple Initial | | | Multiple | | | Multiple Final | | | Multiple Initial | | | Multiple Final | | |
| Manure Utilized on CMU | 14,400 gallons | | | 14,400 gallons | | | 14,400 gallons | | | 10 tons | | | 10 tons | | |

| App. 4: Crop Yrs. 2020 | DK3 | | | DK3 | | | DK4 | | | DK5 | | | DK6 | | |
|--|---|----------------------------|--------|--|----------------------------|--------|---|----------------------------|--------|--|----------------------------|--------|---|----------------------------|--------|
| CMU/Field ID | | | | | | | | | | | | | | | |
| Acres | 2.4 | | | 2.4 | | | 3.8 | | | 2.0 | | | 3.2 | | |
| Soil Test Report Date | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH |
| | 84 | 72 | 6.5 | 84 | 72 | 6.5 | 115 | 65 | 6.8 | 172 | 56 | 6.7 | 83 | 37 | 6.5 |
| P Index Part A Evaluation | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Planting Alfalfa-Grass with Manure | | | Planting Alfalfa-Grass with Manure | | | Established Alfalfa Grass with Manure | | | Planting Alfalfa-Grass with Manure | | | Planting Alfalfa-Grass with Manure | | |
| Planned Yield | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | |
| PSU Soil Test Recommendation (lb/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 200 | 0 | 210 | 200 | 0 | 210 | 200 | 0 | 220 | 200 | 0 | 220 | 200 | 0 | 230 |
| User Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 165 | 0 | 210 | 145 | -92 | 146 | 165 | 0 | 220 | 165 | 0 | 220 | 165 | 0 | 230 |
| Manure Group | Liquid Duck Manure | | | Liquid Duck Manure | | | Liquid Duck Manure | | | Liquid Duck Manure | | | Liquid Duck Manure | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.15 | | | 0.15 | | | 0.15 | | | 0.15 | | | 0.15 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | |
| N Balanced Manure Rate (ton; gal/A) | 33,333 gal/A | | | 29,293 gal/A | | | 33,333 gal/A | | | 33,333 gal/A | | | 33,333 gal/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 2,609 gal/A | | | 0 gal/A | | | 2,609 gal/A | | | 2,609 gal/A | | | 2,609 gal/A | | |
| | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 0.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 60.0 | | |
| P Index Value | 66 | | | 66 | | | 65 | | | 54 | | | 73 | | |
| Planned Manure Rate (ton or gal/A) | 4000 gal/A | | | 4000 gal/A | | | 4000 gal/A | | | 4000 gal/A | | | 4000 gal/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 20 | 92 | 64 | 20 | 92 | 64 | 20 | 92 | 64 | 20 | 92 | 64 | 20 | 92 | 64 |
| Nutrient Balance after Manure | 0 | -92 | 146 | 0 | -184 | 82 | 0 | -92 | 156 | 0 | -92 | 156 | 0 | -92 | 166 |
| Supplemental Fertilizer (lb/A) | 0 | 0 | 0 | 0 | 0 | 82 | 0 | 0 | 156 | 0 | 0 | 156 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | | | 0 | -184 | 0 | 0 | -92 | 0 | 0 | -92 | 0 | | | |
| Multiple Application | Multiple Initial | | | Multiple Final | | | | | | | | | Multiple Initial | | |
| Manure Utilized on CMU | 9,600 gallons | | | 9,600 gallons | | | 15,200 gallons | | | 8,000 gallons | | | 12,800 gallons | | |

| App. 4: Crop Yrs. 2020 | DK6 | | | DK7 | | | DKP1 | | | EH1 | | |
|--|---|----------------------------|---------------|---|----------------------------|---------------|--|----------------------------|---------------|---|----------------------------|---------------|
| CMU/Field ID | | | | | | | | | | | | |
| Acres | 3.2 | | | 3.9 | | | 18.4 | | | 14.3 | | |
| Soil Test Report Date | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH |
| | 83 | 37 | 6.5 | 129 | 131 | 6.5 | 74 | 83 | 6.0 | 129 | 77 | 6.2 |
| P Index Part A Evaluation | Farm Mgmt Change | | | Farm Mgmt Change <150ft | | | Farm Mgmt Change <150ft | | | Farm Mgmt Change | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Planting Alfalfa-Grass with Manure | | | Established Alfalfa Grass with Manure | | | Established Pasture (without legume) | | | Corn for Grain (No-till) | | |
| Planned Yield | 4 ton/A | | | 4 ton/A | | | 2.5 ton/A | | | 150 bu/A | | |
| PSU Soil Test Recommendation (lb/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 200 | 0 | 230 | 200 | 0 | 120 | 125 | 0 | 100 | 150 | 0 | 70 |
| User Soil Test Recommendation (lb/A) | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 0 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 145 | -92 | 166 | 165 | 0 | 120 | 90 | 0 | 100 | 100 | 0 | 70 |
| Manure Group | Liquid Duck Manure | | | Liquid Duck Manure | | | Beef Finishing Cattle - Uncollected | | | Liquid Duck Manure | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization-Incorporation after 7 days or none | | | Spring: Spring or summer utilization-Incorporation after 7 days or none | | | Grazing anytime with nutrient uptake during growing season | | | Spring: Spring or summer utilization-Incorporation after 7 days or none | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.15 | | | 0.15 | | | 0.20 | | | 0.15 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | | April - Oct: No incorp or incorp > 1 wk. | | |
| N Balanced Manure Rate (ton; gal/A) | 29,293 gal/A | | | 33,333 gal/A | | | 32 tons/A | | | 20,202 gal/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 0 gal/A | | | 2,609 gal/A | | | 8 tons/A | | | 2,609 gal/A | | |
| | Crop P Removal (lb/A) 0.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 37.5 | | | Crop P Removal (lb/A) 60.0 | | |
| P Index Value | 73 | | | 74 | | | 37 | | | 79 | | |
| Planned Manure Rate (ton or gal/A) | 4000 gal/A | | | 4000 gal/A | | | 6.92 tons/A | | | 6000 gal/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 20 | 92 | 64 | 20 | 92 | 64 | 19 | 35 | 55 | 30 | 138 | 96 |
| Nutrient Balance after Manure | 0 | -184 | 102 | 0 | -92 | 56 | 71 | -35 | 45 | 70 | -138 | -26 |
| Supplemental Fertilizer (lb/A) | 0 | 0 | 102 | 0 | 0 | 56 | 71 | 0 | 45 | 70 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -184 | 0 | 0 | -92 | 0 | 0 | -35 | 0 | 0 | -138 | -26 |
| Multiple Application | Multiple Final | | | | | | | | | | | |
| Manure Utilized on CMU | 12,800 gallons | | | 15,600 gallons | | | 127 tons | | | 85,800 gallons | | |

| App. 4: Crop Yrs. 2021 | DK1 | | | DK1 | | | DK1 | | | DK2 | | | DK2 | | |
|--|---|----------------------------|--------|--|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|--|----------------------------|--------|
| CMU/Field ID | | | | | | | | | | | | | | | |
| Acres | 3.6 | | | 3.6 | | | 3.6 | | | 2.7 | | | 2.7 | | |
| Soil Test Report Date | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH |
| | 40 | 72 | 6.5 | 40 | 72 | 6.5 | 40 | 72 | 6.5 | 55 | 62 | 6.3 | 55 | 62 | 6.3 |
| P Index Part A Evaluation | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Established Alfalfa Grass with Manure | | | Established Alfalfa Grass with Manure | | | Established Alfalfa Grass with Manure | | | Established Alfalfa Grass with Manure | | | Established Alfalfa Grass with Manure | | |
| Planned Yield | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | |
| PSU Soil Test Recommendation (lb/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 200 | 30 | 210 | 200 | 30 | 210 | 200 | 30 | 210 | 200 | 0 | 220 | 200 | 0 | 220 |
| User Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 165 | 30 | 210 | 145 | -62 | 146 | 125 | -154 | 82 | 165 | 0 | 220 | 145 | -92 | 156 |
| Manure Group | Liquid Duck Manure | | | Liquid Duck Manure | | | Liquid Duck Manure | | | Liquid Duck Manure | | | Liquid Duck Manure | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Summer: Summer utilization-Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.15 | | | 0.15 | | | 0.15 | | | 0.15 | | | 0.15 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | |
| N Balanced Manure Rate (ton; gal/A) | 33,333 gal/A | | | 29,293 gal/A | | | 25,253 gal/A | | | 33,333 gal/A | | | 29,293 gal/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 2,609 gal/A | | | 0 gal/A | | | 0 gal/A | | | 2,609 gal/A | | | 0 gal/A | | |
| | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 0.0 | | | Crop P Removal (lb/A) 0.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 0.0 | | |
| P Index Value | 65 | | | 65 | | | 65 | | | 67 | | | 67 | | |
| Planned Manure Rate (ton or gal/A) | 4000 gal/A | | | 4000 gal/A | | | 4000 gal/A | | | 4000 gal/A | | | 4000 gal/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 20 | 92 | 64 | 20 | 92 | 64 | 20 | 92 | 64 | 20 | 92 | 64 | 20 | 92 | 64 |
| Nutrient Balance after Manure | 0 | -62 | 146 | 0 | -154 | 82 | 0 | -246 | 18 | 0 | -92 | 156 | 0 | -184 | 92 |
| Supplemental Fertilizer (lb/A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | | | | | | | 0 | -246 | 0 | | | | | | |
| Multiple Application | Multiple Initial | | | Multiple | | | Multiple Final | | | Multiple Initial | | | Multiple | | |
| Manure Utilized on CMU | 14,400 gallons | | | 14,400 gallons | | | 14,400 gallons | | | 10,800 gallons | | | 10,800 gallons | | |

| App. 4: Crop Yrs. 2021 | DK2 | | | DK3 | | | DK3 | | | DK4 | | | DK4 | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| CMU/Field ID | | | | | | | | | | | | | | | |
| Acres | 2.7 | | | 2.4 | | | 2.4 | | | 3.8 | | | 3.8 | | |
| Soil Test Report Date | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH |
| | 55 | 62 | 6.3 | 84 | 72 | 6.5 | 84 | 72 | 6.5 | 115 | 65 | 6.8 | 115 | 65 | 6.8 |
| P Index Part A Evaluation | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Established Alfalfa Grass with Manure | | | Established Alfalfa Grass with Manure | | | Established Alfalfa Grass with Manure | | | Established Alfalfa Grass with Manure | | | Established Alfalfa Grass with Manure | | |
| Planned Yield | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | |
| PSU Soil Test Recommendation (lb/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 200 | 0 | 220 | 200 | 0 | 210 | 200 | 0 | 210 | 200 | 0 | 220 | 200 | 0 | 220 |
| User Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 0 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 125 | -184 | 92 | 165 | 0 | 210 | 145 | -92 | 146 | 165 | 0 | 220 | 155 | -32 | 166 |
| Manure Group | Liquid Duck Manure | | | Liquid Duck Manure | | | Liquid Duck Manure | | | Beef Finisher Manure | | | Beef Finisher Manure | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Summer: Summer utilization-Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Spring: Spring or summer utilization-Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Spring: Spring or summer utilization-Incorporation after 7 days or none | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.15 | | | 0.15 | | | 0.15 | | | 0.20 | | | 0.20 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | |
| N Balanced Manure Rate (ton; gal/A) | 25,253 gal/A | | | 33,333 gal/A | | | 29,293 gal/A | | | 65 tons/A | | | 61 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 0 gal/A | | | 2,609 gal/A | | | 0 gal/A | | | 7 tons/A | | | 3 tons/A | | |
| | Crop P Removal (lb/A) 0.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 0.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 28.0 | | |
| P Index Value | 67 | | | 66 | | | 66 | | | 51 | | | 51 | | |
| Planned Manure Rate (ton or gal/A) | 4000 gal/A | | | 4000 gal/A | | | 4000 gal/A | | | 3.75 tons/A | | | 3.75 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 20 | 92 | 64 | 20 | 92 | 64 | 20 | 92 | 64 | 10 | 32 | 54 | 10 | 32 | 54 |
| Nutrient Balance after Manure | 0 | -276 | 28 | 0 | -92 | 146 | 0 | -184 | 82 | 0 | -32 | 166 | 0 | -64 | 112 |
| Supplemental Fertilizer (lb/A) | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 82 | 0 | 0 | 0 | 0 | 0 | 112 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -276 | 0 | | | | 0 | -184 | 0 | | | | 0 | -64 | 0 |
| Multiple Application | Multiple Final | | | Multiple Initial | | | Multiple Final | | | Multiple Initial | | | Multiple Final | | |
| Manure Utilized on CMU | 10,800 gallons | | | 9,600 gallons | | | 9,600 gallons | | | 14 tons | | | 14 tons | | |

| App. 4: Crop Yrs. 2021 | DK5 | | | DK6 | | | DK6 | | | DK7 | | | DKP1 | | |
|--|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|---|----------------------------|--------|
| CMU/Field ID | | | | | | | | | | | | | | | |
| Acres | 2.0 | | | 3.2 | | | 3.2 | | | 3.9 | | | 18.4 | | |
| Soil Test Report Date | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | | April 12, 2018 | | |
| Laboratory Name | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | | Spectrum Analytic, Inc. | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH | ppm P | ppm K | pH |
| | 172 | 56 | 6.7 | 83 | 37 | 6.5 | 83 | 37 | 6.5 | 129 | 131 | 6.5 | 74 | 83 | 6.0 |
| P Index Part A Evaluation | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change | | | Farm Mgmt Change <150ft | | | Farm Mgmt Change <150ft | | |
| Part A Result | Part B | | | Part B | | | Part B | | | Part B | | | Part B | | |
| Crop | Established Alfalfa Grass with Manure | | | Established Alfalfa Grass with Manure | | | Established Alfalfa Grass with Manure | | | Established Alfalfa Grass with Manure | | | Established Pasture (without legume) | | |
| Planned Yield | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 2.5 ton/A | | |
| PSU Soil Test Recommendation (lb/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 200 | 0 | 220 | 200 | 0 | 230 | 200 | 0 | 230 | 200 | 0 | 120 | 125 | 0 | 100 |
| User Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 0 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | | 35 | Continuously - Summer Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | |
| Net Nutrients Required (lb/A) | 165 | 0 | 220 | 165 | 0 | 230 | 145 | -92 | 166 | 165 | 0 | 120 | 90 | 0 | 100 |
| Manure Group | Liquid Duck Manure | | | Liquid Duck Manure | | | Liquid Duck Manure | | | Liquid Duck Manure | | | Beef Finishing Cattle - Uncollected | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Grazing anytime with nutrient uptake during growing season | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.15 | | | 0.15 | | | 0.15 | | | 0.15 | | | 0.20 | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | April - Oct: No incorp or incorp > 1 wk. | | | Surface app. when frozen/snow covered | | |
| N Balanced Manure Rate (ton; gal/A) | 33,333 gal/A | | | 33,333 gal/A | | | 29,293 gal/A | | | 33,333 gal/A | | | 32 tons/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 2,609 gal/A | | | 2,609 gal/A | | | 0 gal/A | | | 2,609 gal/A | | | 8 tons/A | | |
| | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 0.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 37.5 | | |
| P Index Value | 54 | | | 73 | | | 73 | | | 74 | | | 37 | | |
| Planned Manure Rate (ton or gal/A) | 4000 gal/A | | | 4000 gal/A | | | 4000 gal/A | | | 4000 gal/A | | | 6.92 tons/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 20 | 92 | 64 | 20 | 92 | 64 | 20 | 92 | 64 | 20 | 92 | 64 | 19 | 35 | 55 |
| Nutrient Balance after Manure | 0 | -92 | 156 | 0 | -92 | 166 | 0 | -184 | 102 | 0 | -92 | 56 | 71 | -35 | 45 |
| Supplemental Fertilizer (lb/A) | 0 | 0 | 156 | 0 | 0 | 0 | 0 | 0 | 102 | 0 | 0 | 56 | 71 | 0 | 45 |
| P Index Application Method | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -92 | 0 | | | | 0 | -184 | 0 | 0 | -92 | 0 | 0 | -35 | 0 |
| Multiple Application | | | | Multiple Initial | | | Multiple Final | | | | | | | | |
| Manure Utilized on CMU | 8,000 gallons | | | 12,800 gallons | | | 12,800 gallons | | | 15,600 gallons | | | 127 tons | | |

| App. 4: Crop Yrs. 2021 | | EH1 | | |
|--|---|----------------------------|---------------|--|
| CMU/Field ID | | | | |
| Acres | 14.3 | | | |
| Soil Test Report Date | April 12, 2018 | | | |
| Laboratory Name | Spectrum Analytic, Inc. | | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH | |
| | 129 | 77 | 6.2 | |
| P Index Part A Evaluation | Farm Mgmt Change | | | |
| Part A Result | Part B | | | |
| Crop | Soybeans with Manure | | | |
| Planned Yield | 40 bu/A | | | |
| PSU Soil Test Recommendation (lb/A) | N | P2O5 | K2O | |
| | 128 | 0 | 80 | |
| User Soil Test Recommendation (lb/A) | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 0 | 0 | 0 | |
| P Index Application Method | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | |
| Manure History Description Residual Manure N (lb/A) | 35 | Continuously - Summer Crop | | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | |
| Net Nutrients Required (lb/A) | 93 | 0 | 80 | |
| Manure Group | Liquid Duck Manure | | | |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | |
| | 0.15 | | | |
| P Index Application Method | April - Oct: No incorp or incorp > 1 wk. | | | |
| N Balanced Manure Rate (ton; gal/A) | 18,788 gal/A | | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 1,739 gal/A | | | |
| | Crop P Removal (lb/A) 40.0 | | | |
| P Index Value | 79 | | | |
| Planned Manure Rate (ton or gal/A) | 6000 gal/A | | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 30 | 138 | 96 | |
| Nutrient Balance after Manure | 0 | -138 | -16 | |
| Supplemental Fertilizer (lb/A) | 0 | 0 | 0 | |
| P Index Application Method | | | | |
| Final Nutrient Balance (lb/A) | 0 | -138 | -16 | |
| Multiple Application | | | | |
| Manure Utilized on CMU | 85,800 gallons | | | |

Appendix 5 - P Index

Crop Yrs. 2019

Pennsylvania P Index Version 2

[Go to NMP Index](#)

[Go to App 4 Input](#)

| PART A: SCREENING TOOL | | PART A: SCREENING TOOL | | | | CMU/Field ID | DK1 |
|---|--|---|---|---|---|--|---------------|
| Is the CMU in a Special Protection watershed? | | Is the CMU in a Special Protection watershed? | | | | | No |
| A significant farm management change as defined by Act 38? | | Is there a significant farm management change as defined by Act 38? | | | | If the answer is Yes to any of these questions, Part B must be used. | Yes |
| Soil Test Mehlich 3 P greater than 200 ppm P? | | Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) | | | | | 40 |
| Contributing Distance from CMU to receiving water <150 ft.? | | Is the Contributing Distance from this CMU to receiving water less than 150 ft.? | | | | | No |
| Is winter manure application planned for this field ? | | Is winter manure application planned for this field ? | | | | | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | 40 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | | 8 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | Fertilizer P (lb P2O5/acre) | | | | | 0, 0, 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | -, -, - |
| SUPPLEMENTAL P FERTILIZER | | Fertilizer P (lb P2O5/acre) | | | | | 0, 0, 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | -, -, - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | | 0 |
| MANURE P RATE | | Manure P (lb P2O5/acre) | | | | | 92, 92, 92 |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | 0.6, 0.6, 0.6 |
| P SOURCE COEFFICIENT ³ | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | | 0.8, 0.8, 0.8 |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | | 132 |
| Source Factor Sum | | | | | | | 140 |
| PART B: TRANSPORT FACTORS | | Soil Loss (ton/acre/yr) | | | | | 1.6 |
| EROSION | | | | | | | |
| RUNOFF POTENTIAL | 0 <i>Drainage Class is Excessively</i> | 2 <i>Drainage Class is Somewhat Excessively</i> | 4 <i>Drainage Class is Well/Moderately Well</i> | 6 <i>Drainage Class is Somewhat Poorly</i> | 8 <i>Drainage Class is Poorly/Very Poorly</i> | | 4 |
| SUBSURFACE DRAINAGE | 0 None | | 1 Random | | 2 ¹ Patterned | | 0 |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | | 6 |
| MODIFIED CONNECTIVITY | 0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | | 1.0 |
| Transport Sum x Modified Connectivity / 24 | | | | | | | 0.23 |
| P Index Value = 2 x Source x Transport | | | | | | | 65 |

Low: 59 or less
Nitrogen based management

Medium: 60 to 79
Nitrogen based management

High: 80 to 99
Phosphorus limited to crop removal

Very High: 100 or greater
No Phosphorus applied

1 OR rapidly permeable soil near a stream

2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Appendix 5 - P Index

Crop Yrs. 2019

| PART A: SCREENING TOOL CMU/Field ID | DK2 | DK3 | DK4 | DK5 | DK6 | DK7 | DKP1 |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 55 | 84 | 115 | 172 | 83 | 129 | 74 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | Yes | Yes |
| Is winter manure application planned for this field ? | No | No | No | No | No | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 55 | 84 | 115 | 172 | 83 | 129 | 74 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 11 | 17 | 23 | 34 | 17 | 26 | 15 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0, 0 | 0, 0 | 0 | 0 | 0, 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0, 0 | 0, 0 | 0 | 0 | 0, 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 138, 138 | 92, 92 | 92 | 138 | 32, 32 | 92 | 35 |
| MANURE APPLICATION METHOD ³ | 0.6, 0.6 | 0.6, 0.6 | 0.6 | 0.6 | 0.6, 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8, 0.8 | 0.8, 0.8 | 0.8 | 0.8 | 0.8, 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 132 | 88 | 44 | 66 | 30 | 44 | 28 |
| Source Factor Sum | 143 | 105 | 67 | 100 | 47 | 70 | 43 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 1.6 | 1.6 | 1.6 | 0.34 | 0.34 | 2.8 | 0.42 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 2 | 6 | 4 | 4 | 6 | 6 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 6 | 8 | 12 | 8 | 8 | 13 | 10 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.23 | 0.32 | 0.48 | 0.35 | 0.35 | 0.53 | 0.43 |
| P Index Value = 2 x Source x Transport | 67 | 66 | 65 | 70 | 32 | 74 | 37 |

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding

Appendix 5 - P Index

Crop Yrs. 2019

| PART A: SCREENING TOOL CMU/Field ID | EH1 |
|--|-----------|
| Is the CMU in a Special Protection watershed? | No |
| A significant farm management change as defined by Act 38? | Yes |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 129 |
| Contributing Distance from CMU to receiving water <150 ft.? | No |
| Is winter manure application planned for this field ? | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 129 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 26 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - |
| SUPPLEMENTAL P FERTILIZER | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 |
| MANURE P RATE | 138 |
| MANURE APPLICATION METHOD ³ | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 66 |
| Source Factor Sum | 92 |
| PART B: TRANSPORT FACTORS | |
| EROSION | 0.36 |
| RUNOFF POTENTIAL | 4 |
| SUBSURFACE DRAINAGE | 0 |
| CONTRIBUTING DISTANCE | 6 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 10 |
| MODIFIED CONNECTIVITY | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.43 |
| P Index Value = 2 x Source x Transport | 79 |

Low: 59 or less
Nitrogen based management

¹ OR rapidly permeable soil near a stream

² *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

³ Error Note: if there is a manure or fertilizer rate and there is no correspondi

Appendix 5 - P Index

Crop Yrs. 2020

Pennsylvania P Index Version 2

[Go to NMP Index](#)

[Go to App 4 Input](#)

| PART A: SCREENING TOOL | | PART A: SCREENING TOOL | | | | CMU/Field ID | DK1 |
|---|--|---|---|---|---|--|---------------|
| Is the CMU in a Special Protection watershed? | | Is the CMU in a Special Protection watershed? | | | | | No |
| A significant farm management change as defined by Act 38? | | Is there a significant farm management change as defined by Act 38? | | | | If the answer is Yes to any of these questions, Part B must be used. | Yes |
| Soil Test Mehlich 3 P greater than 200 ppm P? | | Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) | | | | | 40 |
| Contributing Distance from CMU to receiving water <150 ft.? | | Is the Contributing Distance from this CMU to receiving water less than 150 ft.? | | | | | No |
| Is winter manure application planned for this field ? | | Is winter manure application planned for this field ? | | | | | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | 40 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | | 8 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | Fertilizer P (lb P2O5/acre) | | | | | 0, 0, 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | -, -, - |
| SUPPLEMENTAL P FERTILIZER | | Fertilizer P (lb P2O5/acre) | | | | | 0, 0, 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | -, -, - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | | 0 |
| MANURE P RATE | | Manure P (lb P2O5/acre) | | | | | 92, 92, 92 |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | 0.6, 0.6, 0.6 |
| P SOURCE COEFFICIENT ³ | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | | 0.8, 0.8, 0.8 |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | | 132 |
| Source Factor Sum | | | | | | | 140 |
| PART B: TRANSPORT FACTORS | Soil Loss (ton/acre/yr) | | | | | 1.6 | |
| EROSION | | | | | | | |
| RUNOFF POTENTIAL | 0 <i>Drainage Class is Excessively</i> | 2 <i>Drainage Class is Somewhat Excessively</i> | 4 <i>Drainage Class is Well/Moderately Well</i> | 6 <i>Drainage Class is Somewhat Poorly</i> | 8 <i>Drainage Class is Poorly/Very Poorly</i> | | 4 |
| SUBSURFACE DRAINAGE | 0 None | | 1 Random | | 2 ¹ Patterned | | 0 |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | | 6 |
| MODIFIED CONNECTIVITY | 0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | | 1.0 |
| Transport Sum x Modified Connectivity / 24 | | | | | | | 0.23 |
| P Index Value = 2 x Source x Transport | | | | | | | 65 |

| | | | |
|--|---|--|--|
| Low: 59 or less Nitrogen based management | Medium: 60 to 79 Nitrogen based management | High: 80 to 99 Phosphorus limited to crop removal | Very High: 100 or greater No Phosphorus applied |
|--|---|--|--|

1 OR rapidly permeable soil near a stream
 2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
 3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Appendix 5 - P Index

Crop Yrs. 2020

| PART A: SCREENING TOOL CMU/Field ID | DK2 | DK3 | DK4 | DK5 | DK6 | DK7 | DKP1 |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 55 | 84 | 115 | 172 | 83 | 129 | 74 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | Yes | Yes |
| Is winter manure application planned for this field ? | No | No | No | No | No | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 55 | 84 | 115 | 172 | 83 | 129 | 74 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 11 | 17 | 23 | 34 | 17 | 26 | 15 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0, 0 | 0, 0 | 0 | 0 | 0, 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - | - | - | - | - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0, 0 | 0, 0 | 0 | 0 | 0, 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - | - | - | - | - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 32, 32 | 92, 92 | 92 | 92 | 92, 92 | 92 | 35 |
| MANURE APPLICATION METHOD ³ | 0.6, 0.6 | 0.6, 0.6 | 0.6 | 0.6 | 0.6, 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8, 0.8 | 0.8, 0.8 | 0.8 | 0.8 | 0.8, 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 30 | 88 | 44 | 44 | 88 | 44 | 28 |
| Source Factor Sum | 41 | 105 | 67 | 78 | 105 | 70 | 43 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 1.6 | 1.6 | 1.6 | 0.34 | 0.34 | 2.8 | 0.42 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 2 | 6 | 4 | 4 | 6 | 6 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 6 | 8 | 12 | 8 | 8 | 13 | 10 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.23 | 0.32 | 0.48 | 0.35 | 0.35 | 0.53 | 0.43 |
| P Index Value = 2 x Source x Transport | 19 | 66 | 65 | 54 | 73 | 74 | 37 |

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding

Appendix 5 - P Index

Crop Yrs. 2020

| PART A: SCREENING TOOL CMU/Field ID | EH1 |
|--|-----------|
| Is the CMU in a Special Protection watershed? | No |
| A significant farm management change as defined by Act 38? | Yes |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 129 |
| Contributing Distance from CMU to receiving water <150 ft.? | No |
| Is winter manure application planned for this field ? | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 129 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 26 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - |
| SUPPLEMENTAL P FERTILIZER | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 |
| MANURE P RATE | 138 |
| MANURE APPLICATION METHOD ³ | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 66 |
| Source Factor Sum | 92 |
| PART B: TRANSPORT FACTORS | |
| EROSION | 0.36 |
| RUNOFF POTENTIAL | 4 |
| SUBSURFACE DRAINAGE | 0 |
| CONTRIBUTING DISTANCE | 6 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 10 |
| MODIFIED CONNECTIVITY | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.43 |
| P Index Value = 2 x Source x Transport | 79 |

Low: 59 or less
Nitrogen based management

¹ OR rapidly permeable soil near a stream

² *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

³ Error Note: if there is a manure or fertilizer rate and there is no correspondi

Appendix 5 - P Index

Crop Yrs. 2021

Pennsylvania P Index Version 2

[Go to NMP Index](#)

[Go to App 4 Input](#)

| PART A: SCREENING TOOL | | PART A: SCREENING TOOL | | | | CMU/Field ID | DK1 |
|---|--|---|---|---|---|--|---------------|
| Is the CMU in a Special Protection watershed? | | Is the CMU in a Special Protection watershed? | | | | | No |
| A significant farm management change as defined by Act 38? | | Is there a significant farm management change as defined by Act 38? | | | | If the answer is Yes to any of these questions, Part B must be used. | Yes |
| Soil Test Mehlich 3 P greater than 200 ppm P? | | Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) | | | | | 40 |
| Contributing Distance from CMU to receiving water <150 ft.? | | Is the Contributing Distance from this CMU to receiving water less than 150 ft.? | | | | | No |
| Is winter manure application planned for this field ? | | Is winter manure application planned for this field ? | | | | | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | | 40 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | | 8 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | Fertilizer P (lb P2O5/acre) | | | | | 0, 0, 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | -, -, - |
| SUPPLEMENTAL P FERTILIZER | | Fertilizer P (lb P2O5/acre) | | | | | 0, 0, 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | -, -, - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | | 0 |
| MANURE P RATE | | Manure P (lb P2O5/acre) | | | | | 92, 92, 92 |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | | 0.6, 0.6, 0.6 |
| P SOURCE COEFFICIENT ³ | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | | 0.8, 0.8, 0.8 |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | | 132 |
| Source Factor Sum | | | | | | | 140 |
| PART B: TRANSPORT FACTORS | | Soil Loss (ton/acre/yr) | | | | | 1.6 |
| EROSION | | | | | | | |
| RUNOFF POTENTIAL | 0 <i>Drainage Class is Excessively</i> | 2 <i>Drainage Class is Somewhat Excessively</i> | 4 <i>Drainage Class is Well/Moderately Well</i> | 6 <i>Drainage Class is Somewhat Poorly</i> | 8 <i>Drainage Class is Poorly/Very Poorly</i> | | 4 |
| SUBSURFACE DRAINAGE | 0 None | | 1 Random | | 2 ¹ Patterned | | 0 |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | | 0 |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | | 6 |
| MODIFIED CONNECTIVITY | 0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | | 1.0 |
| Transport Sum x Modified Connectivity / 24 | | | | | | | 0.23 |
| P Index Value = 2 x Source x Transport | | | | | | | 65 |

Low: 59 or less
Nitrogen based management

Medium: 60 to 79
Nitrogen based management

High: 80 to 99
Phosphorus limited to crop removal

Very High: 100 or greater
No Phosphorus applied

1 OR rapidly permeable soil near a stream

2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Appendix 5 - P Index

Crop Yrs. 2021

| PART A: SCREENING TOOL CMU/Field ID | DK2 | DK3 | DK4 | DK5 | DK6 | DK7 | DKP1 |
|--|---------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Is the CMU in a Special Protection watershed? | No | No | No | No | No | No | No |
| A significant farm management change as defined by Act 38? | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 55 | 84 | 115 | 172 | 83 | 129 | 74 |
| Contributing Distance from CMU to receiving water <150 ft.? | No | No | No | No | No | Yes | Yes |
| Is winter manure application planned for this field ? | No | No | No | No | No | No | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No | No | No | No | No | No | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 55 | 84 | 115 | 172 | 83 | 129 | 74 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 11 | 17 | 23 | 34 | 17 | 26 | 15 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0, 0, 0 | 0, 0 | 0, 0 | 0 | 0, 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | -, -, - | -, - | -, - | - | -, - | - | - |
| SUPPLEMENTAL P FERTILIZER | 0, 0, 0 | 0, 0 | 0, 0 | 0 | 0, 0 | 0 | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | -, -, - | -, - | -, - | - | -, - | - | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANURE P RATE | 92, 92, 92 | 92, 92 | 32, 32 | 92 | 92, 92 | 92 | 35 |
| MANURE APPLICATION METHOD ³ | 0.6, 0.6, 0.6 | 0.6, 0.6 | 0.6, 0.6 | 0.6 | 0.6, 0.6 | 0.6 | 1 |
| P SOURCE COEFFICIENT ³ | 0.8, 0.8, 0.8 | 0.8, 0.8 | 0.8, 0.8 | 0.8 | 0.8, 0.8 | 0.8 | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 132 | 88 | 30 | 44 | 88 | 44 | 28 |
| Source Factor Sum | 143 | 105 | 53 | 78 | 105 | 70 | 43 |
| PART B: TRANSPORT FACTORS | | | | | | | |
| EROSION | 1.6 | 1.6 | 1.6 | 0.34 | 0.34 | 2.8 | 0.42 |
| RUNOFF POTENTIAL | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| SUBSURFACE DRAINAGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONTRIBUTING DISTANCE | 0 | 2 | 6 | 4 | 4 | 6 | 6 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 6 | 8 | 12 | 8 | 8 | 13 | 10 |
| MODIFIED CONNECTIVITY | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.23 | 0.32 | 0.48 | 0.35 | 0.35 | 0.53 | 0.43 |
| P Index Value = 2 x Source x Transport | 67 | 66 | 51 | 54 | 73 | 74 | 37 |

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream

2 *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding

Appendix 5 - P Index

Crop Yrs. 2021

| PART A: SCREENING TOOL CMU/Field ID | EH1 |
|--|-----------|
| Is the CMU in a Special Protection watershed? | No |
| A significant farm management change as defined by Act 38? | Yes |
| Soil Test Mehlich 3 P greater than 200 ppm P? | 129 |
| Contributing Distance from CMU to receiving water <150 ft.? | No |
| Is winter manure application planned for this field ? | No |
| Run P Index Part B voluntarily? (No to all Part A questions.) | No |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | 129 |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | 26 |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | 0 |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | - |
| SUPPLEMENTAL P FERTILIZER | 0 |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | - |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | 0 |
| MANURE P RATE | 138 |
| MANURE APPLICATION METHOD ³ | 0.6 |
| P SOURCE COEFFICIENT ³ | 0.8 |
| Manure Rating = Manure Rate x Manure Application Method | 66 |
| Source Factor Sum | 92 |
| PART B: TRANSPORT FACTORS | |
| EROSION | 0.36 |
| RUNOFF POTENTIAL | 4 |
| SUBSURFACE DRAINAGE | 0 |
| CONTRIBUTING DISTANCE | 6 |
| Transport Sum = Erosion + Runoff Potential + Subsurface | 10 |
| MODIFIED CONNECTIVITY | 1.0 |
| Transport Sum x Modified Connectivity / 24 | 0.43 |
| P Index Value = 2 x Source x Transport | 79 |

Low: 59 or less
Nitrogen based management

¹ OR rapidly permeable soil near a stream

² *9* factor does not apply to fields receiving manure with a 35 ft. buffer.

³ Error Note: if there is a manure or fertilizer rate and there is no correspondi

Appendix 6

Manure Management

Date of Site Evaluation: April 6, 2018

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated.

The following areas were evaluated: cattle barn, former goat barn (note: due to the duck integrator requirements, goats are no longer kept on the operation), pasture access area, pond and stream area in the pasture, proposed location of duck barn and HDPE lined earthen manure storage pond

Identification of Inadequate Manure Management Practices and Conditions

List of each specific inadequate manure management practice or condition identified.

The area where cattle access the pasture south of the cattle barn lacks vegetation due to heavy cattle traffic. Roof water from the south side of the cattle barn roof flows through this area during storm events. Cattle have free access to a pond and surface water year round while in the pasture. Long term manure storage will be needed for duck manure to avoid winter manure applications. Morality management will be needed for the duck flocks.

BMPs to Address Manure Management Problem Areas

List of specific BMPs (including PA Technical Guide standard name and number) and management changes that will be implemented to address each of the inadequate practices listed above.

A section of reinforced gravel heavy use area (561) will be installed on the south side of the cattle barn to provide a stable location for cattle to access the barn. Accumulated manure will be removed from this area and applied to cropland prior to installing the heavy use area. Roof gutters and downspouts (558) will be installed on the cattle barn roof to collect roof runoff water and prevent it from washing through the barn access area. The downspouts will be connected to underground outlet (620) pipe to convey roof water to a stable outlet south of the barn. Fence (382) will be installed around the pond and on both sides of the streambank in pasture DKP1 to control cattle access to surface water. A stream crossing (578) will be installed east of the pond to provide a stable location for cattle to cross surface water. A spring development system (574) will be installed at the existing spring in pasture DKP1. Livestock pipeline (516) will convey water collected at the spring development to frost free water troughs (614) in pasture DKP1 to provide an off-stream water source for cattle. An HDPE lined earthen manure storage pond will be constructed east of the proposed duck barn at farmstead 2 to provide long term storage for liquid duck manure. A gravity pipe manure transfer system (634) will be installed to convey duck manure from the duck barn to the proposed HDPE lined earthen manure storage pond. A mortality incinerator (316) will be installed for duck mortality management. Critical area planting (342) will be used to seed areas disturbed by construction activities.

Appendix 7 Stormwater Control

Date of Site Evaluation: April 6, 2018

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated.

The following areas were evaluated: farmsteads, all fields (DK1 through DK7, DKP1, DKP2 and EH1) were evaluated, specifically areas near surface water in fields EH1, DK7, DKP1 and DKP2 were investigated for critical runoff problem areas

Identification of Critical Runoff Problem Areas

List of each specific critical runoff problem area identified.

Practices will be needed to control stormwater from impacting the proposed duck barn and manure storage. Stormwater from fields DK1 through DK4 is causing gully erosion at the field access lane east of the buildings at Farmstead 1. Stormwater runoff from Kiliti Road washes through the driveway on the western side of Farmstead 1.

BMPs to Address Critical Runoff Problem Areas

List of BMPs (including PA Technical Guide standard name and number) and specific management changes that will be implemented to address each of the critical runoff problem areas listed above.

Critical area planting (342) will be used to seed areas disturbed by construction activities. Vegetated swales (412) will be constructed upslope of the proposed duck barn and manure storage to capture surface water and convey it away from the structures. Surface water inlets (587) and underground outlet pipes (620) will be installed at the swales to collect stormwater and convey it to the proposed stormwater basin. The swales will outlet into a stormwater basin (638) east of the duck barn and manure storage. Roof runoff water from the duck barn will also be collected by the swales. Rock lined outlets (468) and a level spreader (587) will be installed at swales, underground outlet pipe and basin outlet locations. A diversion (362) will be installed along the southern edge of field DK4 to collect upslope stormwater. Surface water inlet (587) and underground outlet pipe (620) will be installed to convey stormwater from the diversion to a level spreader (587) located in field DK5.

Appendix 8
Importer/Broker Agreements & NBSs

Nutrient Balance Sheets are not required for importers that have an approved Nutrient Management Plan.

Exporter/Importer Agreement

Manure Used For Agricultural Land Application

Developed consistent with the PA Nutrient and Odor Management Act Program

- 1) This agreement is entered into on June 8, 2018, by Kiliti's Family Farm, LLC (the "exporter") who will supply manure, and Andrew Hess (the "importer"), who will receive the manure from the exporter.
- 2) The purpose of this agreement is to set forth the mutual responsibilities and understanding of the parties with respect to the export of manure from the exporter to the importer.
- 3) The exporter is located at (county, twp, and address): Luzerne County, Salem Township
62 Kiliti Road, Berwick, PA 18603
- 4) The exporter will, as the supply of manure allows, provide the following amounts of manure during the seasons outlined below:

Tons of N/A manure, per season:

Spring 0 tons or Summer 0 tons or Fall 0 tons or Winter 0 tons

Gallons of Duck manure, per season:

Spring up to 139,880 gallons or Summer 0 gallons or Fall up to 139,880 gallons or Winter 0 gallons

Total planned manure exported: (supply of manure may be less than what is planned)

Tons of N/A manure: 0 tons per year

Gallons of Duck manure: up to a total of 139,880 gallons per year

If multi-species are planned, please add additional lines:

- 5) The importer's location and other relevant information as it relates to this manure export, is as follows (maps indicating the location of importing fields must be attached to the supporting Nutrient Balance Sheets if manure is to be land applied at the importing site):
 - a) **Phone number:** 570-394-2309
 - b) **County(s):** Luzerne
 - c) **Address:** 714 Stone Church Road, Berwick, PA 18603
 - d) **Township(s):** Salem
 - d) **Owner(s) of the property receiving manure:** Andrew Hess, Albert Weaver, Jeff Hess, Brandon Schultz, Celis Luciw
 - e) **Total cropland acres managed by the importer:** 75 acres
 - f) **Number and type of animals raised by the importer:** 15 head of beef cattle
 - g) **Number of acres available for this imported manure:** 53.8 acres
 - h) **Other manures (type, amount) imported to the site AND/OR utilized on the site:** (Note- this would include manure that is generated on the site by the importers animals, etc.) 433 tons of beef manure
 - **If other manure is generated, imported and/or utilized, is it applied to the same acres as indicated in item "g" above (relating to "acres available"):** No

- **If other manure is generated, imported and/or utilized, is it applied during the same season as the imported manure: No**
- 6) The exporter will use a Manure Export Sheet to record all manure exported to the importer. These Manure Export Sheets are available from the county conservation district or the State Conservation Commission. Computer generated forms other than the manure export sheet may be used if they contain the same information as, and are reasonably similar in format to, the forms available from the State Conservation Commission or the conservation district.
 - 7) Records relating to the export of manure shall be prepared by the exporter in accordance with the following requirements of the Nutrient and Odor Management Act regulations:
 - a) A Manure Export Sheet shall be used to document all manure exports for their records
 - A copy of the Manure Export Sheet shall be provided to the importer
 - A copy of the Manure Export Sheet shall be retained on site by the exporter
 - b) When the exporter (or someone working for, or contracted by the exporter) applies the exported manure, the exporter shall maintain the following exported manure records:
 - Application dates, areas, rates and methods
 - c) Records shall be maintained by the exporter for a minimum of 3 years
 - d) A manure export informational packet (as supplied by the conservation district or State Conservation Commission) shall be provided to the importer by the time of the manure export. This information only needs to be provided once to the importer.
The manure export informational packet must include the following:
 - i. Exported Manure Informational Packet Guidance Sheet
 - ii. Nutrient Management Planning an Overview (Agronomy Facts 60)
 - iii. Manure Management for Environmental Protection
 - iv. Land Application of Manure- A supplement to the Manure Management Manual Plan Guidance
 - v. Manure Export Sheet
 - vi. Manure Transfer Summary Sheets
 - vii. Manure Field Stacking Requirements Fact Sheet
 - 8) Where applicable, the importer shall properly store manure received from the exporter in accordance with the provisions of the Manure Management Manual and the Pa Technical Guide and shall not cause contamination of surface or ground water. This shall include manure stacked in application fields which may not be retained in fields for > 120 days unless covered or otherwise protected .
 - 9) Manure received by the importer shall be applied to the land at the rate(s) and method(s) provided in the attached "Nutrient Balance Sheet(s)", or in accordance with a Nutrient Management Plan approved for the importing operation. If the importer wishes to change the lands used for imported manure, the nutrient balance sheet must be revised to reflect the changes and be submitted to the conservation district or State Conservation Commission (and DEP if the exporter is a CAFO) prior to implementing the changes.
 - 10) The importer shall comply with applicable manure application setbacks for the imported manure, as outlined in the Nutrient Balance Sheet map(s).
 - 11) For any lands not owned by the importer where the manure will be applied (i.e., rented lands), the importer hereby confirms that the importer has the authority to apply manure on those lands.

12) This agreement shall remain in full effect unless terminated by either party upon thirty days prior written notice to the other party. If this agreement is terminated, the exporter shall notify the county conservation district office that approved their nutrient management plan, of the termination.

Exporter Signature, Name and Date

David L Kiliti (signature)
David L Kiliti (name)
6/8/2018 (date)

Importer Signature, Name and Date

[Signature] (signature)
Andrew Hess (name)
6-5-18 (date)

Nutrient Balance Sheet

Prepared for

Andy Hess
714 Stone Church Road
Berwick, PA 18603
570-394-2309

Prepared by

Todd C. Rush
#988-NMC
120 Lake Street, Ephrata PA 17522
717-721-6795



A handwritten signature in black ink, appearing to read "TCR", is written over a horizontal line.

Nutrient Management Specialist or Broker 2 Signature

Date of Development

August 3, 2018

Exporter Information

Kiliti's Family Farm, LLC
62 Kiliti Road
Berwick, PA 18603

County of Origin

Luzerne County

Nutrient Balance Worksheet Appendices

The following appendices need to accompany the Nutrient Balance Worksheets if applicable:

- Maps of fields where manure is to be applied including required manure application setbacks.
- Completed P-Index spreadsheet and Winter Matrix for each crop management unit (if using Manure Plan Basis: Option 3)

Nutrient Balance Sheet Summary

Importing Farm: Andy Hess

Whole Farm Note: None

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|-------------------|------------------|-------|---------------------------|--------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| Corn Grain Spring | AH1 through AH18 | 53.8 | Corn for Grain | Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation within 5-7 days | 2400 gal/A | 0 | 0 | 0 | 96 | 0 | 0 | 0 | 1 | 4 |
| Corn Grain Fall | AH1 through AH18 | 53.8 | Corn for Grain | Duck Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 2400 gal/A | 0 | 0 | 0 | 108 | 0 | 0 | 0 | 1 | 4 |
| Grass Hay Spring | AH1 through AH18 | 53.8 | Established Mixed Grasses | Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 2600 gal/A | 0 | 0 | 0 | 167 | 0 | 158 | 0 | 0 | 0 |
| Grass Hay Fall | AH1 through AH18 | 53.8 | Established Mixed Grasses | Duck Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 2600 gal/A | 0 | 0 | 0 | 167 | 0 | 158 | 0 | 0 | 0 |
| Sudangrass Spring | AH1 through AH18 | 53.8 | Sudangrass | Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation within 5-7 days | 2600 gal/A | 0 | 0 | 0 | 74 | 0 | 158 | 0 | 0 | 0 |
| Sudangrass Fall | AH1 through AH18 | 53.8 | Sudangrass | Duck Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 2600 gal/A | 0 | 0 | 0 | 87 | 0 | 158 | 0 | 0 | 0 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NBS Summary Notes

Importing Farm:

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|-------------------|---------------------------|--------------|--------------------------------------|--|---|
| Corn Grain Spring | Corn for Grain | Duck Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported duck manure within 100 feet of water wells or 150 feet of surface water. Imported duck manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported duck manure in the same crop year. |
| Corn Grain Fall | Corn for Grain | Duck Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported duck manure within 100 feet of water wells or 150 feet of surface water. Imported duck manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported duck manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall duck manure application. |
| Grass Hay Spring | Established Mixed Grasses | Duck Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported duck manure within 100 feet of water wells or 150 feet of surface water. Imported duck manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported duck manure in the same crop year. |
| Grass Hay Fall | Established Mixed Grasses | Duck Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported duck manure within 100 feet of water wells or 150 feet of surface water. Imported duck manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported duck manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall duck manure application. |
| Sudangrass Spring | Sudangrass | Duck Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported duck manure within 100 feet of water wells or 150 feet of surface water. Imported duck manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported duck manure in the same crop year. |
| Sudangrass Fall | Sudangrass | Duck Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported duck manure within 100 feet of water wells or 150 feet of surface water. Imported duck manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported duck manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall duck manure application. |

Manure Group Information

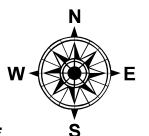
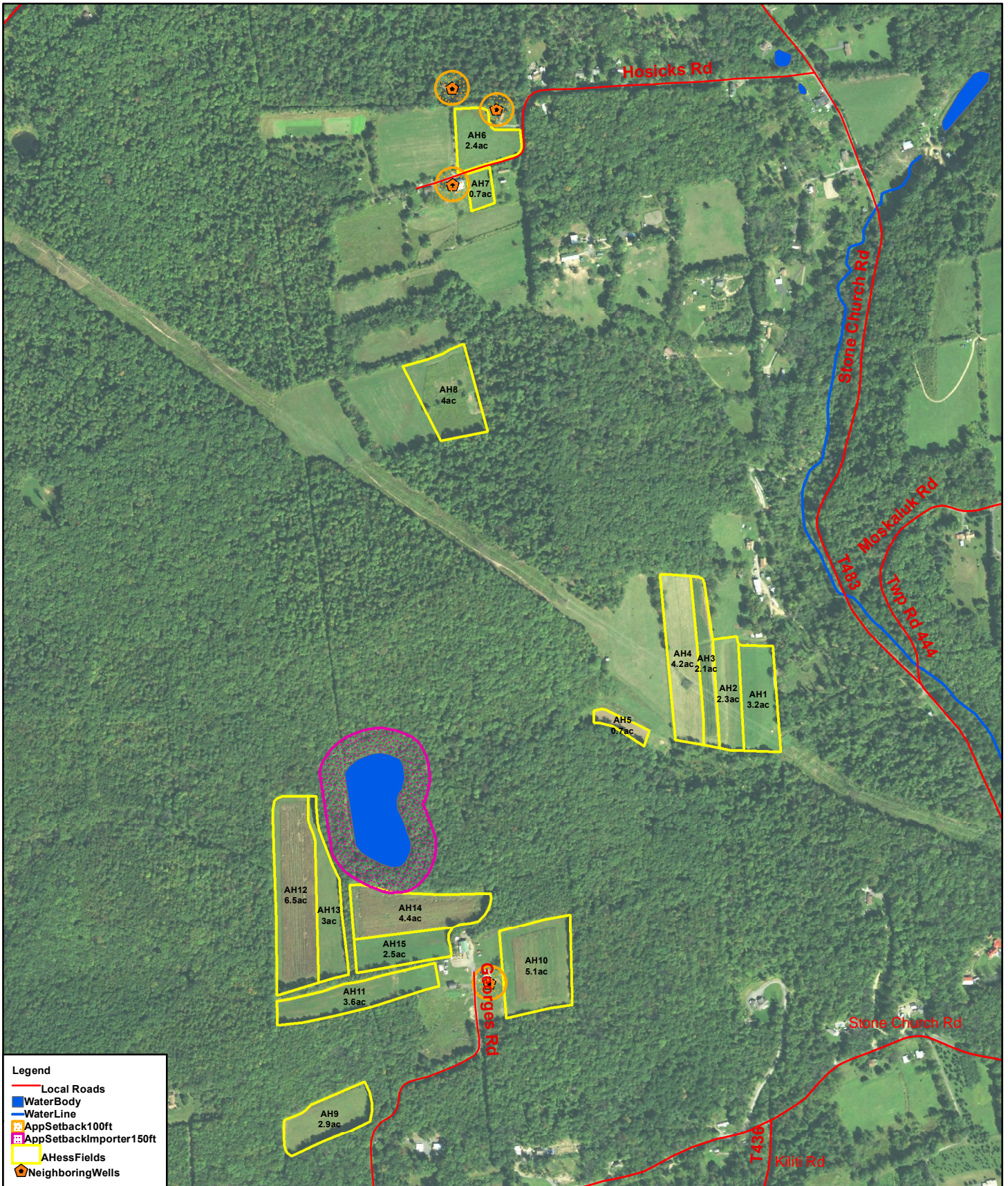
| | |
|---|--------------------|
| Appendix 3 Manure Group Information | Duck Manure |
| Manure Report Date (note if averaging several reports) | Book Value |
| Laboratory Name | PSU Agronomy Guide |
| Manure Type | Poultry |
| Manure Unit (lbs/ton or 1000 gal) | lb/1000 gal |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 33.00 |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 0.00 |
| Total Organic N (lbs/ton or 1000 gal) | 33.00 |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 23.00 |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 16.00 |
| Percent Solids | 5.00 |
| PSC Value (analytical or book value) | 0.80 |

| Nutrient Balance Sheets | | Corn Grain Spring | | | Corn Grain Fall | | | Grass Hay Spring | | | Grass Hay Fall | | | Sudangrass Spring | | | Sudangrass Fall | | |
|--|--|---|-------|--------|---|-------|--------|---|-------|--------|---|-------|--------|---|-------|--------|---|-------|--------|
| Crop Group Identification | | AH1 through AH18 | | | AH1 through AH18 | | | AH1 through AH18 | | | AH1 through AH18 | | | AH1 through AH18 | | | AH1 through AH18 | | |
| Fields | | 53.8 | | | 53.8 | | | 53.8 | | | 53.8 | | | 53.8 | | | 53.8 | | |
| Acres | | Option 1 P Removal | | | Option 1 P Removal | | | Option 1 P Removal | | | Option 1 P Removal | | | Option 1 P Removal | | | Option 1 P Removal | | |
| NBS Option | | No | | | No | | | No | | | No | | | No | | | No | | |
| P Banking | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI | | | | | | | | | | | | | | | | | | | |
| P Index Part A Evaluation | | P Index not Required | | | P Index not Required | | | P Index not Required | | | P Index not Required | | | P Index not Required | | | P Index not Required | | |
| Part A Result | | Corn for Grain | | | Corn for Grain | | | Established Mixed Grasses | | | Established Mixed Grasses | | | Sudangrass | | | Sudangrass | | |
| Crop | | 140 bu/A | | | 140 bu/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | | 4 ton/A | | |
| Planned Yield | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| Crop Removal Recommendations (LB/A) | | 140 | 56 | 42 | 140 | 56 | 42 | 200 | 60 | 200 | 200 | 60 | 200 | 120 | 60 | 200 | 120 | 60 | 200 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Double Crop CarryOver N (lb/A) | | Frequently - Summer Crop | | | Frequently - Summer Crop | | | Frequently - Summer Crop | | | Frequently - Summer Crop | | | Frequently - Summer Crop | | | Frequently - Summer Crop | | |
| Manure History Description Residual Manure N (lb/A) | | No Previous Year Legume | | | No Previous Year Legume | | | No Previous Year Legume | | | No Previous Year Legume | | | No Previous Year Legume | | | No Previous Year Legume | | |
| Legume History Description Residual Legume N (lb/A) | | 120 | | | 120 | | | 180 | | | 180 | | | 100 | | | 100 | | |
| Net Nutrients Required (lb/A) | | Duck Manure | | | Duck Manure | | | Duck Manure | | | Duck Manure | | | Duck Manure | | | Duck Manure | | |
| Manure Group | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | |
| Units | | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| Manure Nutrient Content (lbs/ton or 1000 gal) | | 33.00 | 23.00 | 16.00 | 33.00 | 23.00 | 16.00 | 33.00 | 23.00 | 16.00 | 33.00 | 23.00 | 16.00 | 33.00 | 23.00 | 16.00 | 33.00 | 23.00 | 16.00 |
| Application Season: Management (Incorporation, cover crops, etc.) | | Spring: Spring or summer utilization- Incorporation within 5-7 days | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Spring: Spring or summer utilization- Incorporation within 5-7 days | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | |
| Availability Factors (Total N or NH4-N & Organic N) | | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | | 0.30 | | | 0.15 | | | 0.15 | | | 0.15 | | | 0.30 | | | 0.15 | | |
| P Index Application Method | | 2,400 gal/A | | | 2,400 gal/A | | | 2,600 gal/A | | | 2,600 gal/A | | | 2,600 gal/A | | | 2,600 gal/A | | |
| Planned Manure Rate (ton or gal/A) | | 12,121 gal/A | | | 24,242 gal/A | | | 36,364 gal/A | | | 36,364 gal/A | | | 10,101 gal/A | | | 20,202 gal/A | | |
| N Balanced Manure Rate (ton; gal/A) | | 2,435 gal/A | | | 2,435 gal/A | | | 2,609 gal/A | | | 2,609 gal/A | | | 2,609 gal/A | | | 2,609 gal/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 56.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 60.0 | | | Crop P Removal (lb/A) 60.0 | | |
| P Index Value | | 2,400 gal/A | | | 2,400 gal/A | | | 2,600 gal/A | | | 2,600 gal/A | | | 2,600 gal/A | | | 2,600 gal/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | | 24 | 55 | 38 | 12 | 55 | 38 | 13 | 60 | 42 | 13 | 60 | 42 | 26 | 60 | 42 | 13 | 60 | 42 |
| Nutrient Balance after Manure | | 96 | 1 | 4 | 108 | 1 | 4 | 167 | 0 | 158 | 167 | 0 | 158 | 74 | 0 | 158 | 87 | 0 | 158 |
| Supplemental Fertilizer (lb/A) | | 96 | 0 | 0 | 108 | 0 | 0 | 167 | 0 | 158 | 167 | 0 | 158 | 74 | 0 | 158 | 87 | 0 | 158 |
| P Index Application Method | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Final Nutrient Balance (lb/A) | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Multiple Application | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |
| Soil test or Crop Removal | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

Operation Maps

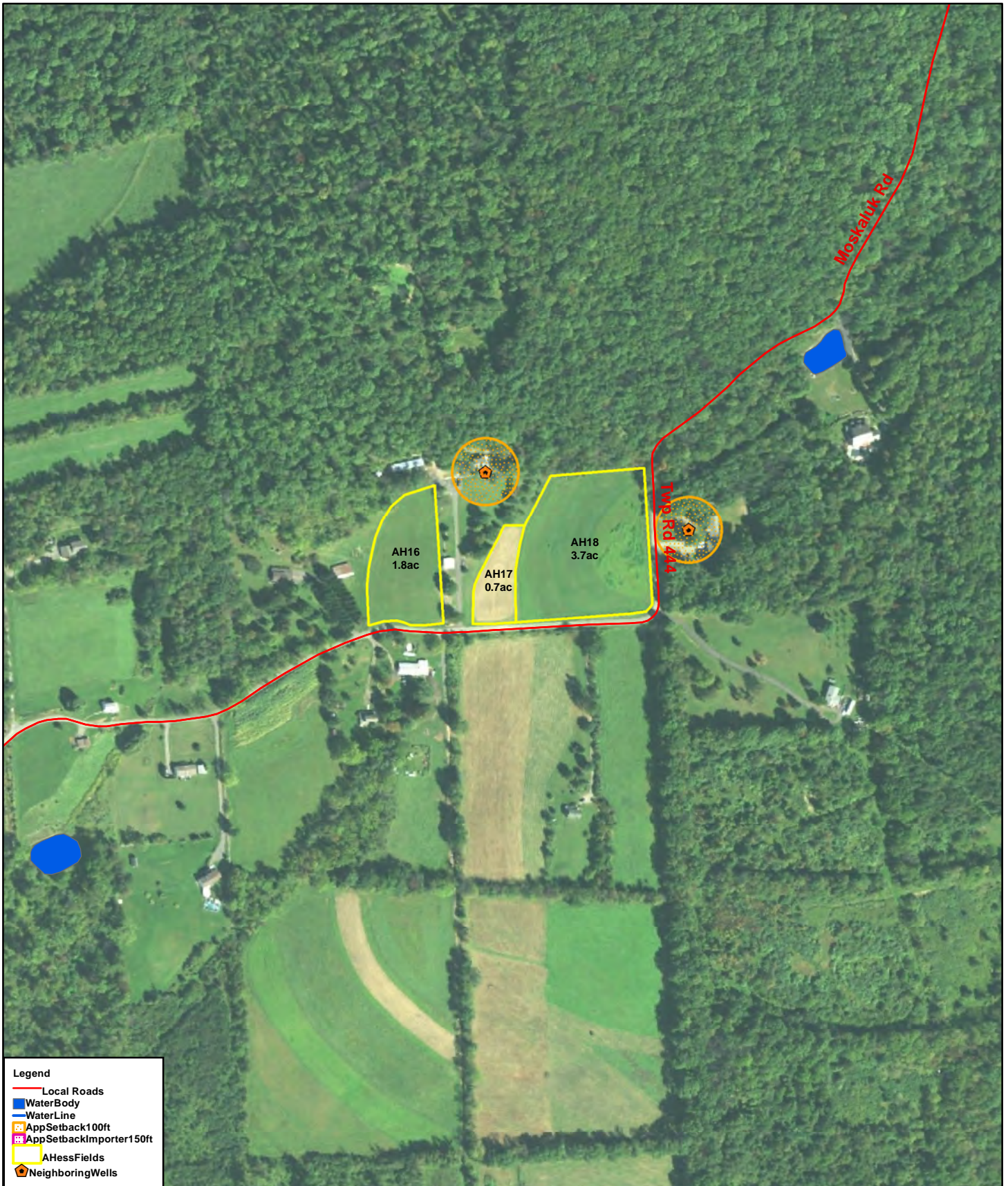
Maps (or aerial photographs) required in Nutrient Balance Sheets must identify: road and road names adjacent to and within the operation; field identification, boundaries and acreage; manure application setback areas and vegetated buffers and associated landscape features (streams and other water bodies, sinkholes, and active water wells or springs); and location of in-field manure stacking areas (including each site in stacking area rotation).

Andy Hess NBS Map Fields AH1 - AH15

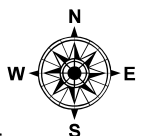


****Field verification of application setbacks and buffers is required prior to land application of manure.****

Andy Hess NBS Map Fields AH16 - AH18



- Legend**
- Local Roads
 - WaterBody
 - WaterLine
 - AppSetback100ft
 - AppSetbackImporter150ft
 - AHessFields
 - NeighboringWells



****Field verification of application setbacks and buffers is required prior to land application of manure.****

Exporter/Importer Agreement

Manure Used For Agricultural Land Application

Developed consistent with the PA Nutrient and Odor Management Act Program

- 1) This agreement is entered into on July 30, 2018, by Kiliti's Family Farm, LLC (the "exporter") who will supply manure, and Lupini Farms (the "importer"), who will receive the manure from the exporter.
- 2) The purpose of this agreement is to set forth the mutual responsibilities and understanding of the parties with respect to the export of manure from the exporter to the importer.
- 3) The exporter is located at (county, twp, and address): Luzerne County, Salem Township
62 Kiliti Road, Berwick, PA 18603
- 4) The exporter will, as the supply of manure allows, provide the following amounts of manure during the seasons outlined below:

Tons of N/A manure, per season:

Spring 0 tons or Summer 0 tons or Fall 0 tons or Winter 0 tons

Gallons of Duck manure, per season:

Spring up to 3,288,800 gallons or Summer 0 gallons or Fall up to 3,288,800 gallons or Winter 0 gallons

Total planned manure exported: (supply of manure may be less than what is planned)

Tons of N/A manure: 0 tons per year

Gallons of Duck manure: up to a total of 3,288,800 gallons per year

If multi-species are planned, please add additional lines:

- 5) The importer's location and other relevant information as it relates to this manure export, is as follows (maps indicating the location of importing fields must be attached to the supporting Nutrient Balance Sheets if manure is to be land applied at the importing site):
 - a) **Phone number:** 570-204-3825
 - b) **County(s):** Columbia & Luzerne
 - c) **Address:** 609 Mifflin Nescopeck Highway, Nescopeck, PA 18635
 - d) **Township(s):** Salem, Nescopeck, Mifflin & North Center
 - d) **Owner(s) of the property receiving manure:** Christopher & Shawna Lupini
 - e) **Total cropland acres managed by the importer:** 1,700 acres
 - f) **Number and type of animals raised by the importer:** None
 - g) **Number of acres available for this imported manure:** 411.1 acres
 - h) **Other manures (type, amount) imported to the site AND/OR utilized on the site:** (Note- this would include manure that is generated on the site by the importers animals, etc.) None
 - **If other manure is generated, imported and/or utilized, is it applied to the same acres as indicated in item "g" above (relating to "acres available"):** N/A

- **If other manure is generated, imported and/or utilized, is it applied during the same season as the imported manure: N/A**
- 6) The exporter will use a Manure Export Sheet to record all manure exported to the importer. These Manure Export Sheets are available from the county conservation district or the State Conservation Commission. Computer generated forms other than the manure export sheet may be used if they contain the same information as, and are reasonably similar in format to, the forms available from the State Conservation Commission or the conservation district.
 - 7) Records relating to the export of manure shall be prepared by the exporter in accordance with the following requirements of the Nutrient and Odor Management Act regulations:
 - a) A Manure Export Sheet shall be used to document all manure exports for their records
 - A copy of the Manure Export Sheet shall be provided to the importer
 - A copy of the Manure Export Sheet shall be retained on site by the exporter
 - b) When the exporter (or someone working for, or contracted by the exporter) applies the exported manure, the exporter shall maintain the following exported manure records:
 - Application dates, areas, rates and methods
 - c) Records shall be maintained by the exporter for a minimum of 3 years
 - d) A manure export informational packet (as supplied by the conservation district or State Conservation Commission) shall be provided to the importer by the time of the manure export. This information only needs to be provided once to the importer.
The manure export informational packet must include the following:
 - i. Exported Manure Informational Packet Guidance Sheet
 - ii. Nutrient Management Planning an Overview (Agronomy Facts 60)
 - iii. Manure Management for Environmental Protection
 - iv. Land Application of Manure- A supplement to the Manure Management Manual Plan Guidance
 - v. Manure Export Sheet
 - vi. Manure Transfer Summary Sheets
 - vii. Manure Field Stacking Requirements Fact Sheet
 - 8) Where applicable, the importer shall properly store manure received from the exporter in accordance with the provisions of the Manure Management Manual and the Pa Technical Guide and shall not cause contamination of surface or ground water. This shall include manure stacked in application fields which may not be retained in fields for > 120 days unless covered or otherwise protected .
 - 9) Manure received by the importer shall be applied to the land at the rate(s) and method(s) provided in the attached "Nutrient Balance Sheet(s)", or in accordance with a Nutrient Management Plan approved for the importing operation. If the importer wishes to change the lands used for imported manure, the nutrient balance sheet must be revised to reflect the changes and be submitted to the conservation district or State Conservation Commission (and DEP if the exporter is a CAFO) prior to implementing the changes.
 - 10) The importer shall comply with applicable manure application setbacks for the imported manure, as outlined in the Nutrient Balance Sheet map(s).
 - 11) For any lands not owned by the importer where the manure will be applied (i.e., rented lands), the importer hereby confirms that the importer has the authority to apply manure on those lands.

12) This agreement shall remain in full effect unless terminated by either party upon thirty days prior written notice to the other party. If this agreement is terminated, the exporter shall notify the county conservation district office that approved their nutrient management plan, of the termination.

Exporter Signature, Name and Date

Paul Kiliti (signature)
DAVID Kiliti (name)
8-6-2018 (date)

Importer Signature, Name and Date

[Signature] (signature)
Chris Lupini (name)
7-30-18 (date)

Nutrient Balance Sheet

Prepared for

Lupini Farms
609 Mifflin Nescopeck Highway
Nescopeck, PA 18635
570-204-3825 - Chris Lupini

Prepared by

Todd C. Rush
#988-NMC
120 Lake Street, Ephrata PA 17522
717-721-6795



A handwritten signature in black ink, appearing to read "TCR", is written over a horizontal line.

Nutrient Management Specialist or Broker 2 Signature

Date of Development

August 6, 2018

Exporter Information

Kiliti's Family Farm, LLC
62 Kiliti Road
Berwick, PA 18603

County of Origin

Luzerne County

Nutrient Balance Worksheet Appendices

The following appendices need to accompany the Nutrient Balance Worksheets if applicable:

- Maps of fields where manure is to be applied including required manure application setbacks.
- Completed P-Index spreadsheet and Winter Matrix for each crop management unit (if using Manure Plan Basis: Option 3)

Nutrient Balance Sheet Summary

Importing Farm: Lupini Farms

Whole Farm Note: None

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|-------------------|---|-------|--------------------------|--------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| Corn Grain Spring | A,B,C,D,E,F,G12,H12,I,J,P12,P34,BH1,BH2,BH3,BH4,BH5,BH6,BH7,8,BH9,SUT1,SUT2,SUT3A,SUT3B | 411.1 | Corn for Grain (No-till) | Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 4 | 10 | 2 | 136 | 0 | 0 | 0 | -114 | -70 |
| Corn Grain Fall | A,B,C,D,E,F,G12,H12,I,J,P12,P34,BH1,BH2,BH3,BH4,BH5,BH6,BH7,8,BH9,SUT1,SUT2,SUT3A,SUT3B | 411.1 | Corn for Grain (No-till) | Duck Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 4 | 10 | 2 | 136 | 0 | 0 | 0 | -114 | -70 |
| Soybeans Spring | A,B,C,D,E,F,G12,H12,I,J,P12,P34,BH1,BH2,BH3,BH4,BH5,BH6,BH7,8,BH9,SUT1,SUT2,SUT3A,SUT3B | 411.1 | Soybeans with Manure | Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -114 | -30 |
| Soybeans Fall | A,B,C,D,E,F,G12,H12,I,J,P12,P34,BH1,BH2,BH3,BH4,BH5,BH6,BH7,8,BH9,SUT1,SUT2,SUT3A,SUT3B | 411.1 | Soybeans with Manure | Duck Manure | Early Fall | Early Fall: Summer utilization with no cover crop: All methods of incorporation | 8000 gal/A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -114 | -30 |
| Wheat Spring | A,B,C,D,E,F,G12,H12,I,J,P12,P34,BH1,BH2,BH3,BH4,BH5,BH6,BH7,8,BH9,SUT1,SUT2,SUT3A,SUT3B | 411.1 | Wheat | Duck Manure | Spring | Spring: Spring or summer utilization-Incorporation after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 38 | 0 | 25 | 0 | -99 | 0 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

| Crop Group | Fields | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|------------|---|-------|-------|--------------|--------------------|---|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| Wheat Fall | A,B,C,D,E,F,G12, H12,I,J,P12,P34, BH1,BH2,BH3,BH4,BH5,BH6,BH7,8,BH9,SUT1,SUT2,SUT3A,SUT3B | 411.1 | Wheat | Duck Manure | Early Fall | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | 8000 gal/A | 0 | 0 | 0 | 38 | 0 | 25 | 0 | -99 | 0 |

¹ See Nutrient Management Plan Summary Notes

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NBS Summary Notes

Importing Farm:

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|-------------------|--------------------------|--------------|--------------------------------------|--|---|
| Corn Grain Spring | Corn for Grain (No-till) | Duck Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported duck manure within 100 feet of water wells or 150 feet of surface water. Imported duck manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported duck manure in the same crop year. |
| Corn Grain Fall | Corn for Grain (No-till) | Duck Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported duck manure within 100 feet of water wells or 150 feet of surface water. Imported duck manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported duck manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall duck manure application. |
| Soybeans Spring | Soybeans with Manure | Duck Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported duck manure within 100 feet of water wells or 150 feet of surface water. Imported duck manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported duck manure in the same crop year. |

| CMU/Field ID | Crop | Manure Group | Planned Rate Notes | Nutrient Balance Notes | Notes |
|---------------|----------------------|--------------|--------------------------------------|--|---|
| Soybeans Fall | Soybeans with Manure | Duck Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported duck manure within 100 feet of water wells or 150 feet of surface water. Imported duck manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported duck manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall duck manure application. |
| Wheat Spring | Wheat | Duck Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported duck manure within 100 feet of water wells or 150 feet of surface water. Imported duck manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported duck manure in the same crop year. |
| Wheat Fall | Wheat | Duck Manure | Planned rate can be applied annually | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | Do not apply imported duck manure within 100 feet of water wells or 150 feet of surface water. Imported duck manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported duck manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall duck manure application. |

Manure Group Information

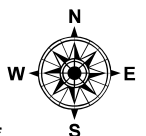
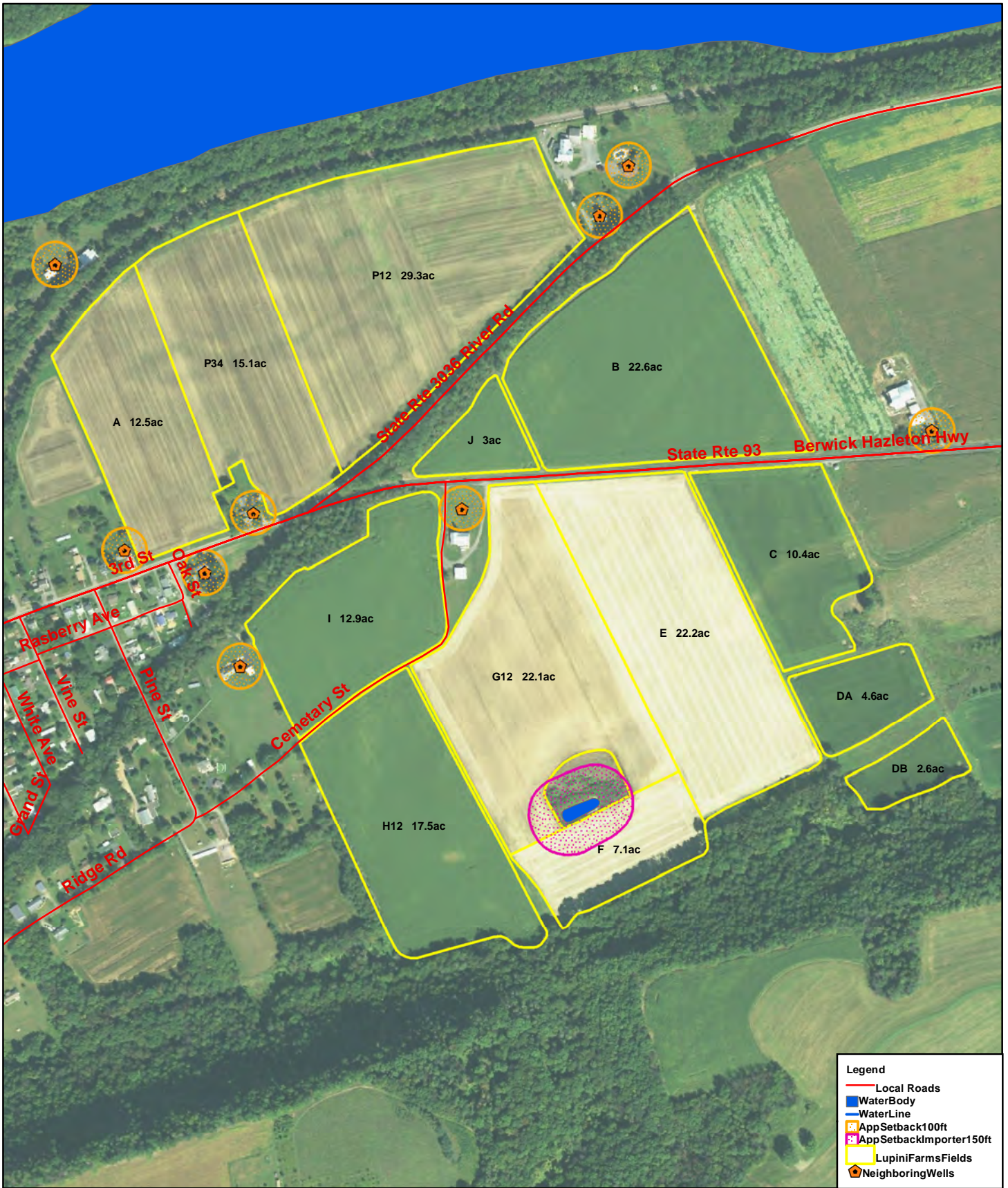
| | |
|---|--------------------|
| Appendix 3 Manure Group Information | Duck Manure |
| Manure Report Date (note if averaging several reports) | Book Value |
| Laboratory Name | PSU Agronomy Guide |
| Manure Type | Poultry |
| Manure Unit (lbs/ton or 1000 gal) | lb/1000 gal |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 33.00 |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 0.00 |
| Total Organic N (lbs/ton or 1000 gal) | 33.00 |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 23.00 |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 16.00 |
| Percent Solids | 5.00 |
| PSC Value (analytical or book value) | 0.80 |

| Nutrient Balance Sheets | Corn Grain Spring | | | Corn Grain Fall | | | Soybeans Spring | | | Soybeans Fall | | | Wheat Spring | | | Wheat Fall | | |
|--|---|--------------------------|---------------|---|--------------------------|---------------|---|--------------------------|---------------|---|--------------------------|---------------|---|--------------------------|---------------|---|--------------------------|---------------|
| Crop Group Identification | A,B,C,D,E,F,G12,H12,I,J,P12,P34,BH1,BH | | | | | | | | | | | | | | | | | |
| Fields | A,B,C,D,E,F,G12,H12,I,J,P12,P34,BH1,BH | | | | | | | | | | | | | | | | | |
| Acres | 411.1 | | | 411.1 | | | 411.1 | | | 411.1 | | | 411.1 | | | 411.1 | | |
| NBS Option | Option 2 Nitrogen Requirement | | | Option 2 Nitrogen Requirement | | | Option 2 Nitrogen Requirement | | | Option 2 Nitrogen Requirement | | | Option 2 Nitrogen Requirement | | | Option 2 Nitrogen Requirement | | |
| P Banking | | | | | | | | | | | | | | | | | | |
| Mehlich 3 Soil Test P | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | | ppm P | | |
| For Option 2 enter maximum Soil Test | 178 | | | 178 | | | 178 | | | 178 | | | 178 | | | 178 | | |
| For Option 3 enter soil test for PI | | | | | | | | | | | | | | | | | | |
| P Index Part A Evaluation | | | | | | | | | | | | | | | | | | |
| Part A Result | P Index not Required | | | P Index not Required | | | P Index not Required | | | P Index not Required | | | P Index not Required | | | P Index not Required | | |
| Crop | Corn for Grain (No-till) | | | Corn for Grain (No-till) | | | Soybeans with Manure | | | Soybeans with Manure | | | Wheat | | | Wheat | | |
| Planned Yield | 200 bu/A | | | 200 bu/A | | | 70 bu/A | | | 70 bu/A | | | 85 bu/A | | | 85 bu/A | | |
| Crop Removal Recommendations (LB/A) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 200 | 80 | 60 | 200 | 80 | 60 | 224 | 70 | 98 | 224 | 70 | 98 | 85 | 85 | 153 | 85 | 85 | 153 |
| Soil Test Recommendation (lb/A) | | | | | | | | | | | | | | | | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | 4 | 10 | 2 | 4 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Double Crop CarryOver N (lb/A) | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Manure History Description Residual Manure N (lb/A) | 20 | Frequently - Summer Crop | | 20 | Frequently - Summer Crop | | 20 | Frequently - Summer Crop | | 20 | Frequently - Summer Crop | | 7 | Frequently - Winter Crop | | 7 | Frequently - Winter Crop | |
| Legume History Description Residual Legume N (lb/A) | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | No Previous Year Legume | | 0 | Soybeans, 70 bu/A | | 0 | Soybeans, 70 bu/A | |
| Net Nutrients Required (lb/A) | 176 | 70 | 58 | 176 | 70 | 58 | 204 | 70 | 98 | 204 | 70 | 98 | 78 | 85 | 153 | 78 | 85 | 153 |
| Manure Group | Duck Manure | | | Duck Manure | | | Duck Manure | | | Duck Manure | | | Duck Manure | | | Duck Manure | | |
| Units | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | | lb/1000 gal | | |
| Manure Nutrient Content (lbs/ton or 1000 gal) | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O | N | P2O5 | K2O |
| | 33.00 | 23.00 | 16.00 | 33.00 | 23.00 | 16.00 | 33.00 | 23.00 | 16.00 | 33.00 | 23.00 | 16.00 | 33.00 | 23.00 | 16.00 | 33.00 | 23.00 | 16.00 |
| Application Season: Management (Incorporation, cover crops, etc.) | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Summer utilization with no cover crop: All methods of incorporation | | | Spring: Spring or summer utilization- Incorporation after 7 days or none | | | Early Fall: Early spring utilization incl. winter crop in double crop system: Incorporated after 7 days or none | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N | Total N | NH4-N | Org. N |
| | 0.15 | | | 0.15 | | | 0.15 | | | 0.15 | | | 0.15 | | | 0.15 | | |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| N Balanced Manure Rate (ton; gal/A) | 35,556 gal/A | | | 35,556 gal/A | | | 41,212 gal/A | | | 41,212 gal/A | | | 15,758 gal/A | | | 15,758 gal/A | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | 3,043 gal/A | | | 3,043 gal/A | | | 3,043 gal/A | | | 3,043 gal/A | | | 3,696 gal/A | | | 3,696 gal/A | | |
| | Crop P Removal (lb/A) 70.0 | | | Crop P Removal (lb/A) 70.0 | | | Crop P Removal (lb/A) 70.0 | | | Crop P Removal (lb/A) 70.0 | | | Crop P Removal (lb/A) 85.0 | | | Crop P Removal (lb/A) 85.0 | | |
| P Index Value | | | | | | | | | | | | | | | | | | |
| Planned Manure Rate (ton or gal/A) | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | | 8,000 gal/A | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 40 | 184 | 128 | 40 | 184 | 128 | 40 | 184 | 128 | 40 | 184 | 128 | 40 | 184 | 128 | 40 | 184 | 128 |
| Nutrient Balance after Manure | 136 | -114 | -70 | 136 | -114 | -70 | 0 | -114 | -30 | 0 | -114 | -30 | 38 | -99 | 25 | 38 | -99 | 25 |
| Supplemental Fertilizer (lb/A) | 136 | 0 | 0 | 136 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 25 | 38 | 0 | 25 |
| P Index Application Method | | | | | | | | | | | | | | | | | | |
| Final Nutrient Balance (lb/A) | 0 | -114 | -70 | 0 | -114 | -70 | 0 | -114 | -30 | 0 | -114 | -30 | 0 | -99 | 0 | 0 | -99 | 0 |
| Multiple Application | | | | | | | | | | | | | | | | | | |
| Soil test or Crop Removal | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | | Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs | | |

Operation Maps

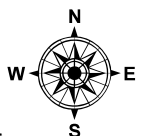
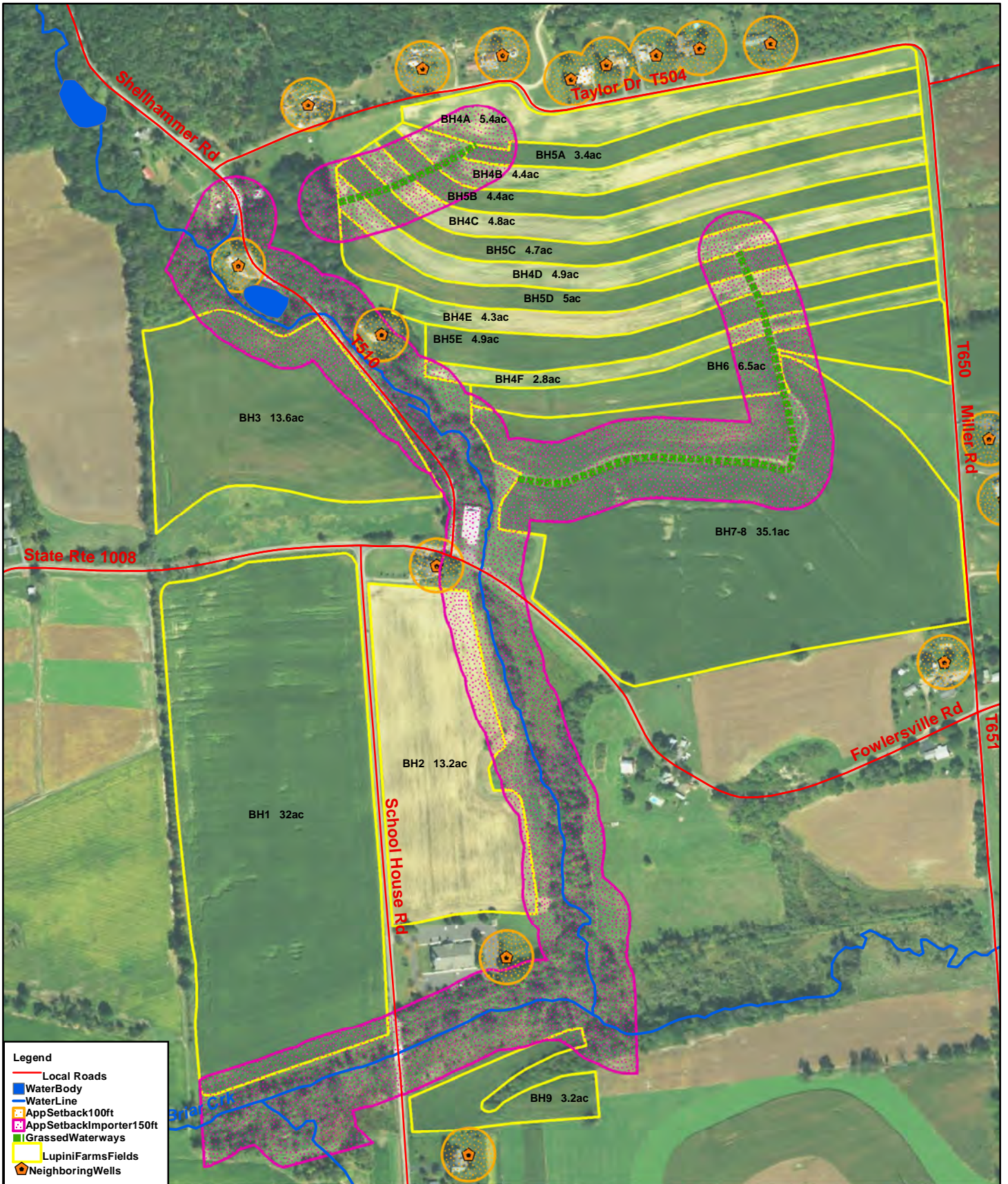
Maps (or aerial photographs) required in Nutrient Balance Sheets must identify: road and road names adjacent to and within the operation; field identification, boundaries and acreage; manure application setback areas and vegetated buffers and associated landscape features (streams and other water bodies, sinkholes, and active water wells or springs); and location of in-field manure stacking areas (including each site in stacking area rotation).

Lupini Farms NBS Map Fields A - J, P



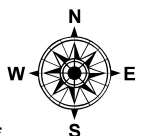
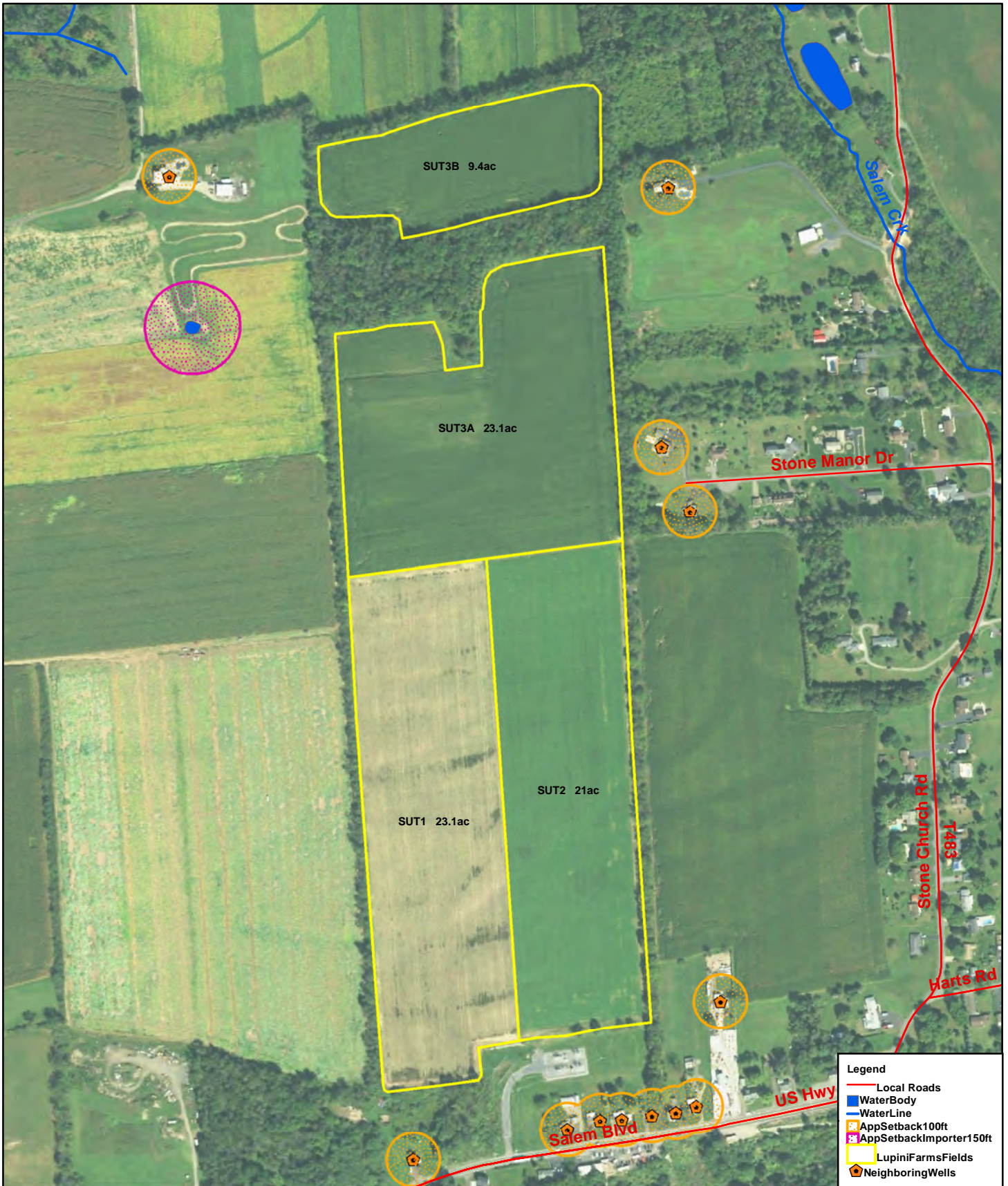
****Field verification of application setbacks and buffers is required prior to land application of manure.****

Lupini Farms NBS Map Fields BH1 - BH9



****Field verification of application setbacks and buffers is required prior to land application of manure.****

Lupini Farms NBS Map Fields SUT1 - SUT3



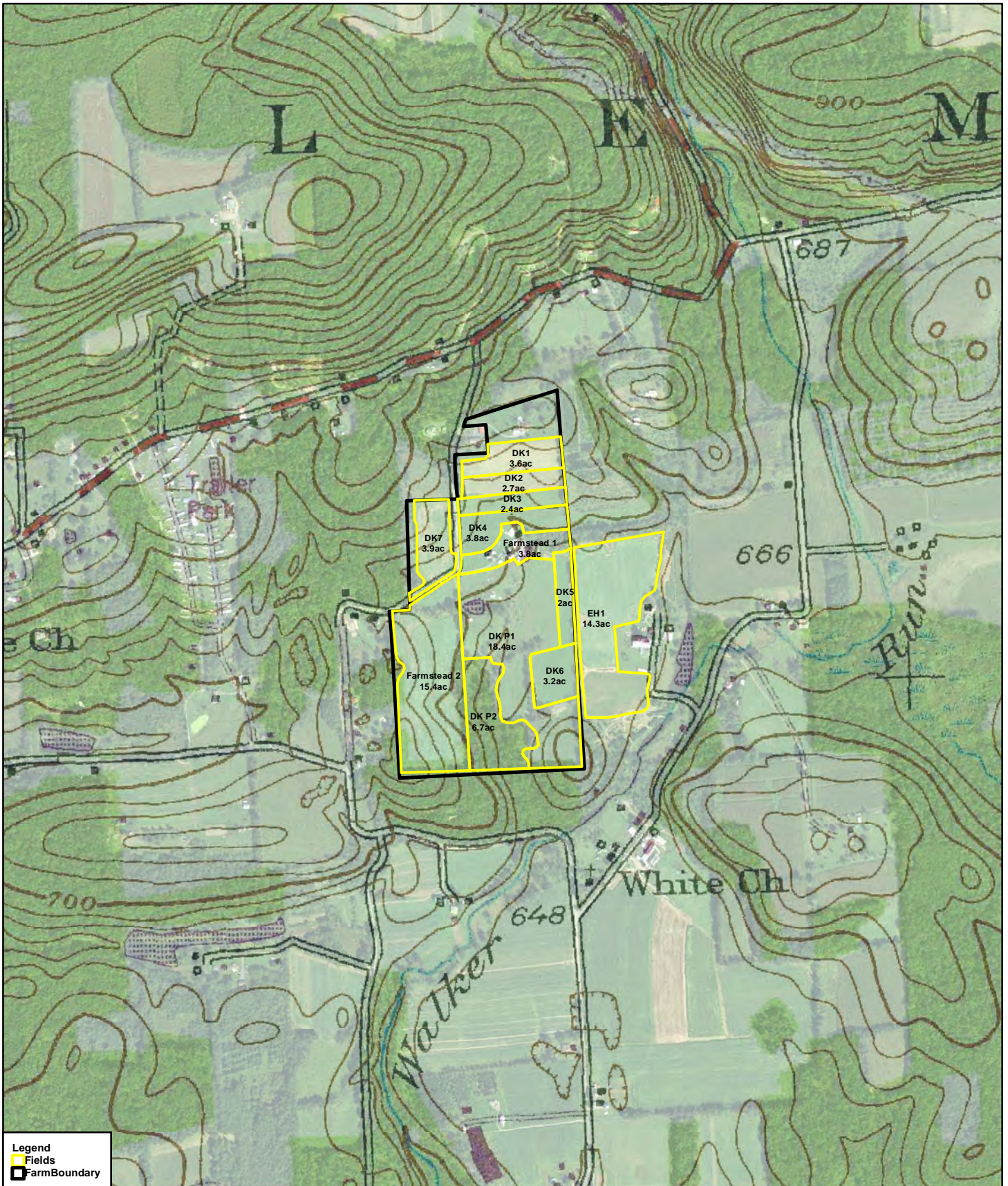
****Field verification of application setbacks and buffers is required prior to land application of manure.****

Appendix 9

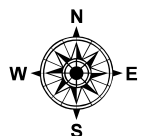
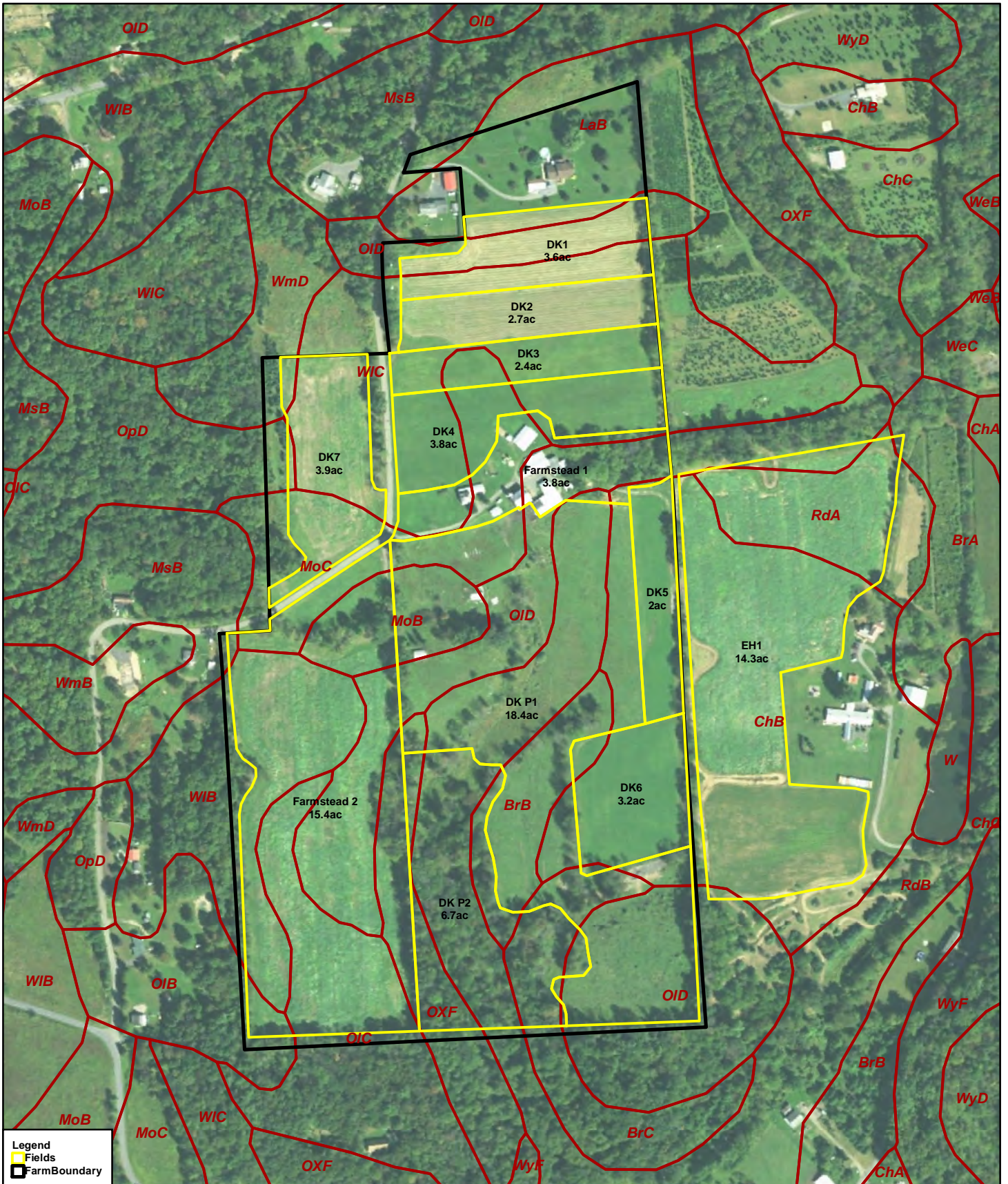
Operation Maps

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Topographic Map and Soils Map** must be included here. The Topographic map must be drawn to scale and identify the land included in the plan with operation boundaries. The Soils Map must include the field identification and boundaries, soil types and slopes with soil legend. Adding P Index lines can be helpful on the Topographic or Soils map but are not required. The Operator Management Map must be included in the Nutrient Management Plan Summary.

Kiliti's Family Farm, LLC Topographic Map



Kiliti's Family Farm, LLC Soils Map



Luzerne County, Pennsylvania Soils Legend

| | | | |
|------------|---|------------|--|
| ASF | ARNOT-ROCK OUTCROP COMPLEX, STEEP | MeC | MECKESVILLE CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES |
| Ag | ALLUVIAL LAND | MeD | MECKESVILLE CHANNERY SILT LOAM, 15 TO 25 PERCENT SLOPES |
| AIB | ALVIRA SILT LOAM, 3 TO 8 PERCENT SLOPES | MFB | MECKESVILLE VERY STONY SILT LOAM, 3 TO 8 PERCENT SLOPES |
| AnB | ALVIRA VERY STONY SILT LOAM, 0 TO 8 PERCENT SLOPES | MfD | MECKESVILLE VERY STONY SILT LOAM, 8 TO 25 PERCENT SLOPES |
| ArB | ARNOT-ROCK OUTCROP COMPLEX, 0 TO 8 PERCENT SLOPES | Mg | MINE DUMP |
| ArD | ARNOT-ROCK OUTCROP COMPLEX, 8 TO 25 PERCENT SLOPES | Mh | MINE DUMP, BURNED |
| At | ATHERTON SILT LOAM, GRAY SUBSOIL VARIANT | Mm | MINE WASH |
| Bf | BASHER SOILS | MoB | MORRIS CHANNERY SILT LOAM, 0 TO 8 PERCENT SLOPES |
| BkB | BATH CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES | MoC | MORRIS CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES |
| BkC | BATH CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES | MsB | MORRIS VERY STONY SILT LOAM, 0 TO 8 PERCENT SLOPES |
| BkD | BATH CHANNERY SILT LOAM, 15 TO 25 PERCENT SLOPES | MsC | MORRIS VERY STONY SILT LOAM, 8 TO 15 PERCENT SLOPES |
| BnB | BATH VERY STONY SILT LOAM, 3 TO 8 PERCENT SLOPES | Mu | MUCK |
| BnD | BATH VERY STONY SILT LOAM, 8 TO 25 PERCENT SLOPES | OXF | QUAGA AND LORDSTOWN EXTREMELY STONY SILT LOAMS STEEP |
| BrA | BRACEVILLE GRAVELLY LOAM, 0 TO 3 PERCENT SLOPES | OIB | QUAGA AND LORDSTOWN CHANNERY SILT LOAMS, 3 TO 8 PERCENT SLOPES |
| BrB | BRACEVILLE GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES | OIC | QUAGA AND LORDSTOWN CHANNERY SILT LOAMS, 8 TO 15 PERCENT SLOPES |
| Brc | BRACEVILLE GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES | OID | QUAGA AND LORDSTOWN CHANNERY SILT LOAMS, 15 TO 25 PERCENT SLOPES |
| BuB | BUCHANAN CHANNERY LOAM, 3 TO 8 PERCENT SLOPES | OpB | QUAGA AND LORDSTOWN EXTREMELY STONY SILT LOAMS, 3 TO 8 PERCENT SLOPES |
| BxB | BUCHANAN EXTREMELY STONY LOAM, 3 TO 8 SLOPES | OpD | QUAGA AND LORDSTOWN EXTREMELY STONY SILT LOAMS, 8 TO 25 PERCENT SLOPES |
| BxD | BUCHANAN EXTREMELY STONY LOAM, 8 TO 25 PERCENT SLOPES | PQ | PITS AND QUARRIES |
| CF | CUT AND FILL LAND | PoB | POCONO GRAVELLY SANDY LOAM, 3 TO 8 PERCENT SLOPES |
| ChA | CHENANGO GRAVELLY LOAM, 0 TO 3 PERCENT SLOPES | PoC | POCONO GRAVELLY SANDY LOAM, 8 TO 15 PERCENT SLOPES |
| ChB | CHENANGO GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES | PpB | POCONO EXTREMELY STONY SANDY LOAM, 3 TO 8 PERCENT SLOPES |
| ChC | CHENANGO GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES | PpD | POCONO EXTREMELY STONY SANDY LOAM, 8 TO 25 PERCENT SLOPES |
| CIA | CHIPPEWA SILT LOAM, 0 TO 3 PERCENT SLOPES | Ps | POPE SOILS |
| CIB | CHIPPEWA SILT LOAM, 3 TO 8 PERCENT SLOPES | RdA | REXFORD LOAM, 0 TO 3 PERCENT SLOPES |
| CnB | CHIPPEWA VERY STONY SILT LOAM, 0 TO 8 PERCENT SLOPES | RdB | REXFORD LOAM, 3 TO 8 PERCENT SLOPES |
| DEF | DEKALB EXTREMELY STONY SANDY LOAM, STEEP | ShA | SHELMADINE SILT LOAM, 0 TO 5 PERCENT SLOPES |
| DdB | DEKALB EXTREMELY STONY SANDY LOAM, 0 TO 8 PERCENT SLOPES | SkB | SHELMADINE VERY STONY SILT LOAM, 0 TO 5 PERCENT SLOPES |
| DdD | DEKALB EXTREMELY STONY SANDY LOAM, 8 TO 25 PERCENT SLOPES | Sm | STRIP MINE |
| Ho | HOLLY SILT LOAM | Ub | URBAN LAND |
| KdB | KEDRON CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES | Uf | URBAN LAND, RARELY FLOODED |
| KdC | KEDRON CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES | VoB | VOLUSIA CHANNERY SILT LOAM, 0 TO 8 PERCENT SLOPES |
| KeB | KEDRON VERY STONY SILT LOAM, 3 TO 8 PERCENT SLOPES | VoC | VOLUSIA CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES |
| KeC | KEDRON VERY STONY SILT LOAM, 8 TO 20 PERCENT SLOPES | VrB | VOLUSIA VERY STONY SILT LOAM, 0 TO 8 PERCENT SLOPES |
| KwB | KEDRON CHANNERY SILT LOAM, SOMEWHAT POORLY DRAINED, 0 TO 8 PERCENT SLOPES | VrC | VOLUSIA VERY STONY SILT LOAM, 8 TO 15 PERCENT SLOPES |
| KxB | KEDRON VERY STONY SILT LOAM, SOMEWHAT POORLY DRAINED, 0 TO 8 PERCENT SLOPES | W | BODIES OF WATER 2 TO 40 ACRES IN SIZE |
| LEF | LACKAWANNA AND BATH VERY STONY SILT LOAMS, STEEP | Wa | WAYLAND SILT LOAM |
| LaB | LACKAWANNA CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES | WeB | WEIKERT AND KLINESVILLE CHANNERY SILT LOAMS, 3 TO 8 PERCENT SLOPES |
| LaC | LACKAWANNA CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES | WeC | WEIKERT AND KLINESVILLE CHANNERY SILT LOAMS, 8 TO 15 PERCENT SLOPES |
| LaD | LACKAWANNA CHANNERY SILT LOAM, 15 TO 25 PERCENT SLOPES | WeD | WEIKERT AND KLINESVILLE CHANNERY SILT LOAMS, 15 TO 25 PERCENT SLOPES |
| LcB | LACKAWANNA VERY STONY SILT LOAM, 3 TO 8 PERCENT SLOPES | WIB | WELLSBORO CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES |
| LcD | LACKAWANNA VERY STONY SILT LOAM, 8 TO 25 PERCENT SLOPES | WIC | WELLSBORO CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES |
| LkB | LECK KILL CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES | WID | WELLSBORO CHANNERY SILT LOAM, 15 TO 25 PERCENT SLOPES |
| LkC | LECK KILL CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES | WmB | WELLSBORO VERY STONY SILT LOAM, 3 TO 8 PERCENT SLOPES |
| LkD | LECK KILL CHANNERY SILT LOAM, 15 TO 25 PERCENT SLOPES | WmD | WELLSBORO VERY STONY SILT LOAM, 8 TO 25 PERCENT SLOPES |
| Ln | LINDEN SOILS | WrB | WURTSBORO CHANNERY LOAM, 3 TO 8 PERCENT SLOPES |
| MaB | MARDIN CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES | WrC | WURTSBORO CHANNERY LOAM, 8 TO 15 PERCENT SLOPES |
| MaC | MARDIN CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES | WrD | WURTSBORO CHANNERY LOAM, 15 TO 25 PERCENT SLOPES |
| MaD | MARDIN CHANNERY SILT LOAM, 15 TO 25 PERCENT SLOPES | WtB | WURTSBORO EXTREMELY STONY LOAM, 3 TO 8 SLOPES |
| McB | MARDIN VERY STONY SILT LOAM, 3 TO 8 PERCENT SLOPES | WtD | WURTSBORO EXTREMELY STONY LOAM, 8 TO 25 PERCENT SLOPES |
| McD | MARDIN VERY STONY SILT LOAM, 8 TO 25 PERCENT SLOPES | WyD | WYOMING GRAVELLY LOAM, 15 TO 25 PERCENT SLOPES |
| MeB | MECKESVILLE CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES | WyF | WYOMING GRAVELLY LOAM, 25 TO 60 PERCENT SLOPES |

Supporting Information & Documentation

Includes if applicable the Rainfall Additions Worksheet, Winter Application Matrix, Residual N Calculation Worksheet and other supplemental worksheets included in the NMP Spreadsheet. Attach information and documentation necessary to support plan content not included elsewhere in the NMP Spreadsheet or appendices. Examples include, but are not limited to, documentation of animal weights if Agronomy Facts 54 is not used, bedding calculations, or calculations for irrigation rates.

| Manure Analysis 5 Year Running Average | | | | | | |
|--|-----------------------------|--------------------|-------------|-------------|-------------|-------------|
| Manure Average for Crop Years. 2019 | Liquid Duck Manure | | | | | |
| | Average | 1 year ago | 2 years ago | 3 years ago | 4 years ago | 5 years ago |
| Manure Report Date | Book Value | Book Value | | | | |
| Laboratory Name | PSU Agronomy Guide | PSU Agronomy Guide | | | | |
| Manure Type | Poultry | Poultry | | | | |
| Manure Unit (lbs/ton or 1000 gal) | lb/1000 gal | lb/1000 gal | | | | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 33.00 | 33.00 | | | | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | Complete NH ₄ -N | | | | | |
| Total Organic N (lbs/ton or 1000 gal) | | 33.00 | | | | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 23.00 | 23.00 | | | | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 16.00 | 16.00 | | | | |
| Percent Solids | 5.00 | 5.00 | | | | |
| PSC Value (Enter analytical or book value) | 0.80 | 0.80 | | | | |

| Manure Average for Crop Years. 2019 | Beef Finisher Manure | | | | | |
|--|-------------------------|-------------------------|-------------|-------------|-------------|-------------|
| | Average | 1 year ago | 2 years ago | 3 years ago | 4 years ago | 5 years ago |
| Manure Report Date | Apr 12 2018 | Apr 12 2018 | | | | |
| Laboratory Name | Spectrum Analytic, Inc. | Spectrum Analytic, Inc. | | | | |
| Manure Type | Other | Other | | | | |
| Manure Unit (lbs/ton or 1000 gal) | lb/ton | lb/ton | | | | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 12.80 | 12.80 | | | | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 1.40 | 1.40 | | | | |
| Total Organic N (lbs/ton or 1000 gal) | 11.40 | 11.40 | | | | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 8.40 | 8.40 | | | | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 14.40 | 14.40 | | | | |
| Percent Solids | 27.65 | 27.65 | | | | |
| PSC Value (Enter analytical or book value) | 0.80 | 0.80 | | | | |

MANURE STORAGE WINTER CAPACITY PLANNING LEVEL DETERMINATION SPREADSHEET for Sloped Waste Storage Facilities

This spreadsheet is one option to solve for the required Vertical storage depth for CAFO's going into the winter storage period. Sloped interiors result in a variation of capacity per unit of depth. Using four inputs, the program generates a set of data for the facility volume. Additional data determines the vertical depths and volumes to be subtracted from the total storage depth. The final step is a simple trial and error input to develop the vertical depth required. Outputs include a summary planview, x-section, and a Stage-Storage curve.

Note: User to fill in all Blue cells

| | | | |
|-------------------------------|----------------------------------|----------------------------|-------------------------|
| Operator or Farm Name: | Kiliti's Family Farm, LLC | Storage ID or Name: | HDPE Lined Storage Pond |
| Completed by: | Todd C. Rush - TeamAg, Inc. | County: | Luzerne |
| <u>Data Input</u> | (Enter data in light blue cells) | Date: | 7/6/18 |

**Storage Pond Dimensions being
Evaluated**

| | | | | | | | |
|--------------------------------------|---------|------|--------|--|---------|--------|--------|
| Width of Storage | "W" | 100 | Feet | (Measured at inside top of slope) | | | |
| Length of Storage | "L" | 240 | Feet | (Measured at inside top of slope) | | | |
| Depth of Storage | "D" | 12 | Feet | (Measured from top of embankment to pumpout depth) | | | |
| Interior Side Slope | | 2 | :1 | (Commonly 2.5, but can be 2.0 or 3.0) | | | |
| Freeboard | | 1 | Feet | (See Guidelines: Either 1' or 2' for all sites) | | | |
| 25yr or 100 yr 24 hr rainfall | | 7.09 | Inches | (See Table 5 and use value or highest in range or Go to NOAA 14) | | | |
| Net Rainfall over pit | Dec Net | 2.01 | inches | Paved Lot runoff Dec Net | 0 | inches | |
| (From Supplement 7 | Jan Net | 1.47 | inches | (If paved area drains into | Jan Net | 0 | inches |
| Assume evap.) | Feb Net | 1.59 | inches | storage) | Feb Net | 0 | inches |

NOTE: The Dec Net value will be prorated 17/31 to reflect partial value for Dec.)

| | | | |
|---|---------|-------------|--|
| Paved Drainage Area into storage | 0 | Square Feet | (Enter Zero if none) |
| Manure, washwater, bedding excluding any outside drainage areas over 76 days | 296,182 | Gallons | (This is derived from data in Appendix 3 by getting daily production and multiplying by 76.) (Dec 15 thru Feb 28 or 76 Days) |

Note: User to use Trial and Error in Olive Green Cell to find minimum Depth

Outputs & Results

(Yellow cells auto-filled)

**Kiliti's Family Farm, LLC
HDPE Lined Storage Pond**

Depth from top of storage Feet

Depth after subtracting Freeboard Feet

Gallons of storage at this depth

Combined volume of wastes over 76 days, paved lot, 24 hr and net rainfall over storage Gallons

| | | |
|---------------------------------------|--------------------------------------|---------|
| Vol. of wastes over 76 days | <input type="text" value="296,182"/> | Gallons |
| Vol. of runoff from paved lot | <input type="text" value="0"/> | Gallons |
| Vol. of 24hr event over top area | <input type="text" value="106,066"/> | Gallons |
| Vol. of Net rainfall over top area | <input type="text" value="62,267"/> | Gallons |
| Vol. of 24hr event over drainage area | <input type="text" value="0"/> | Gallons |

Maximum Volume entering winter period Gallons

Enter the highest value that does not exceed **Maximum Volume** shown above. Watch corresponding volume for selected depth, shown to left to assist you in the process.

Feet Gallons Shows Volume at your selected depth
Depth selected gets as close to Maximum volume without going over

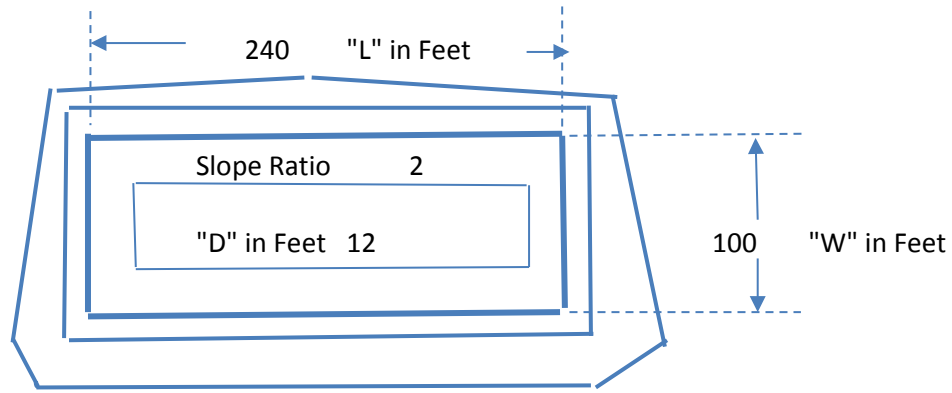
This is the minimum vertical distance from the top of the embankment to the top of the manure level on Dec. 15

Feet

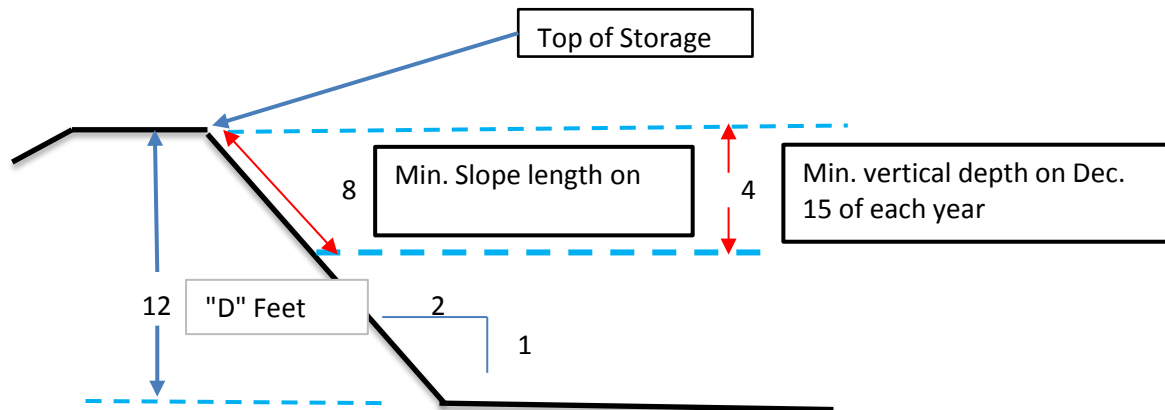
or

The equivalent slope distance from top of embankment to manure level on Dec. 15

Feet

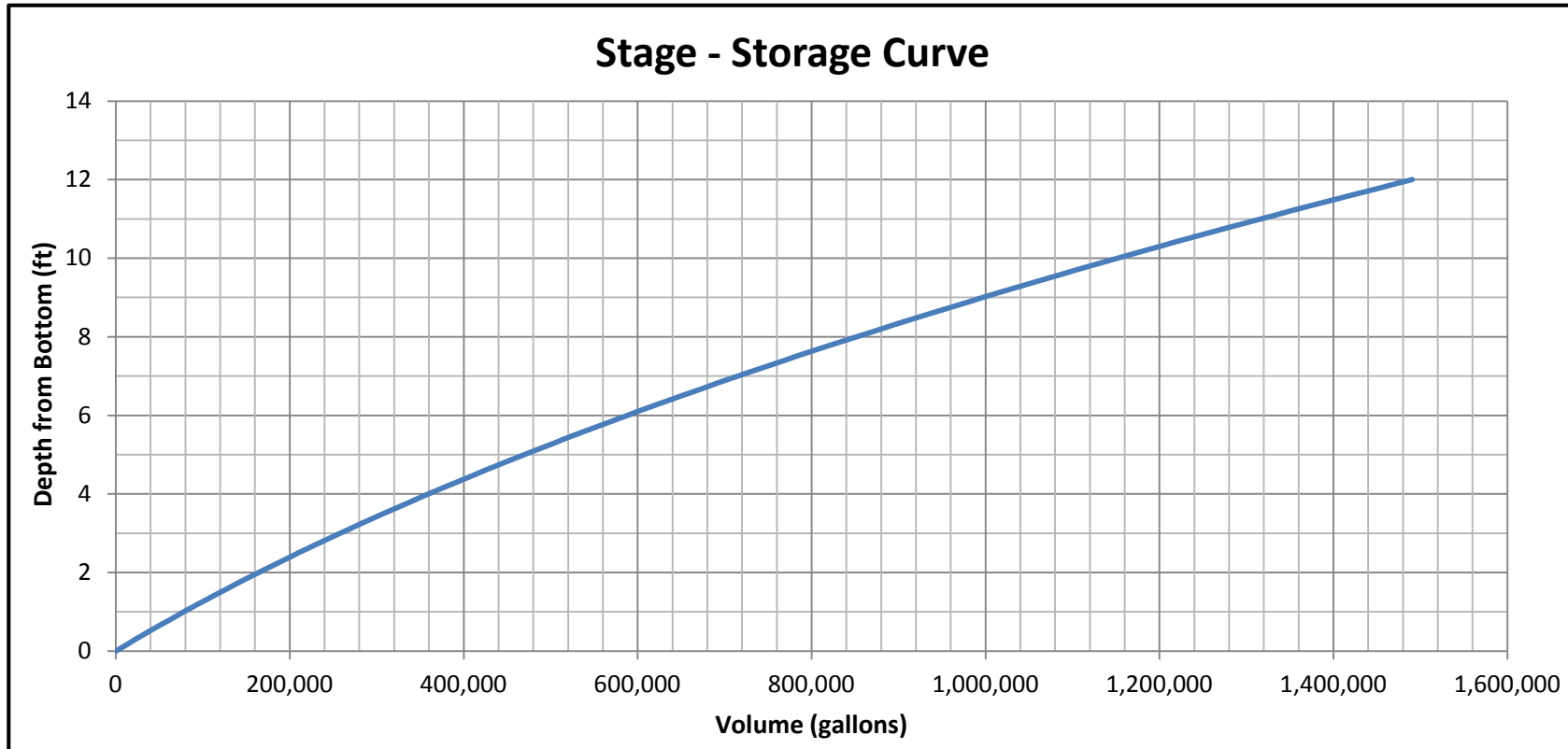


PLANVIEW OF SITE



OUTPUT SUMMARY X-SECTION

(Includes runoff from a 0 Square foot paved lot)



This chart shows capacity at any depth starting from bottom

Disclaimer: This program assumes constant interior slopes and a flat bottom. No credit is given for sloped bottoms or ramp volumes. Therefore the use of a Stage Storage Curve generated from "As-built" data is recommended, if available from your Engineering Consultant.

Emergency Response Plan

If an emergency spill or leak should occur you need to take the following actions:

1) **Ensure that you and other people are safe. If the spill or leak involves a public road:**

- a. Contact the police for traffic control: *Salem Township Police - 911*
- b. Use flares, safety cones, etc. to warn approaching motorists

2) **Stop the leak or spill:**

- a. If the leak or spill occurs while emptying the storage:
 - i. Stop pumps, close valves and / or stop siphoning of manure
 - ii. Park on top of the flexible piping to pinch it closed
 - iii. If necessary, direct manure to another storage structure
 - iv. Plug holes in the impoundment, build dams to capture the leak and either pump the manure back into the storage or spread it on crop fields according to your nutrient management plan
- b. If the spill happens while on the road:
 - i. Pull off to the side of the road
 - ii. Plug the leak or otherwise stop the flow of manure from the tank
 - iii. Build a berm or dike to keep manure from flowing into streams, ditches, etc.
 - iv. Call the police for traffic control: *Salem Township Police – 911*

3) **Contain and control the leak or spill:**

- a. Build a containment dam to capture the manure using soil, gravel, hay bales, etc. Provide an area for the impounded manure to run into and be temporarily stored. Limit the area in contact with manure. Local individuals with excavation and manure hauling equipment are:
 - i. *Columbia Excavating, LLC – 570-759-0813*
 - ii. *Tri-County Spreading – 570-692-0188*
- b. Prevent manure from running into streams, ditches, waterways, etc.
- c. Use absorbent materials such as straw, hay, sawdust, animal feed or soil to soak up the manure and to limit or stop manure flow.
- d. Check for contaminated subsurface tile lines and divert manure flow from inlet structures

4) **Notify the proper authorities:**

Pennsylvania Department of Environmental Protection Emergency Response – 570-327-3636
Luzerne County Conservation District – 570-674-7991
PA Fish & Boat Commission Northeast Regional Office – 570-477-5717
TeamAg, Inc. Nutrient Management Specialist – 570-764-7003

- a. Make a record of the details of the spill and the actions you took to remedy the situation. Take pictures of the extent of the spill as well as your containment and cleanup practices.
- b. If a spill enters a sinkhole or otherwise has the potential to enter groundwater, notify adjacent landowners who use private wells for their water supply.

5) **Clean up the leak or spill:**

- a. Clean up procedures may be directed by the authorities listed above.
- b. Pick up absorbent materials you used and properly dispose of the material.
- c. Restore damaged areas if necessary.



NON-FINAL FORM

Version 2.0

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP

October 18, 2018
Month, Day and Year

Nutrient Management Plan

For Crop Year(s)

2019

2020

2021

NON-FINAL FORM

Version 1

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP

August 9, 2018
Month, Day and Year

Prepared For

Operator's Name, Mailing Address, Telephone Number(s)

Kiliti's Family Farm, LLC – David L. Kiliti, 22 Kiliti Road, Berwick, PA 18603, 570-441-3936 (David Cell)

Operation's Location Address (if different than above)

62 Kiliti Road, Berwick, PA 18603

Site Name (CAFOs)

Kiliti's Family Farm, LLC CAFO

Prepared By

Nutrient Management Specialist's Name, Address, Telephone Number(s)

Todd C. Rush

TeamAg Inc.

120 Lake Street

Ephrata, PA 17522

570-764-7003

Nutrient Management Specialist's Program Certification Number

#988-NMC

FINAL FORM

This version of the plan will be considered for action by the Conservation District Board at their November 13, 2018 meeting

October 18, 2018
MONTH, DAY AND YEAR

Administratively Complete Date

August 9, 2018

Plan Approval Date

Plan Update Submission Date(s)

(updates to the approved plan not requiring board action)



PA Bulletin
Advertis August 25, 2018
September 25, 2018
(end of 30 day)



**COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION**

DATE: October 26, 2018

TO: Karl G. Brown, Executive Secretary
State Conservation Commission

FROM: Michael J. Walker, NM Regional Coordinator
State Conservation Commission

SUBJECT: Nutrient Management Plan Review (1)
Luzerne County, Pennsylvania

Action Requested

Action on a Nutrient Management Plan for the following operation in Luzerne County:

1. Downs Racing, LP. DBA - Mohegan Sun at Pocono Downs, 1280 Highway 315, Wilkes-Barre, PA 1870 (crop year 2019, 2020 and 2021)

Background

I have completed the required review of the subject nutrient management plan listed above. Final corrections to the plan were received at the PDA Region 2 office on October 25, 2018. As of that date, the plan is considered to be in its final form. The operation is located in Luzerne County and considered to be a concentrated animal operation (CAO) under the PA Nutrient and Odor Management Act. This operation is classified as a Concentrated Animal Feeding Operation (CAFO) under DEP regulatory authority and is required to hold an approved Act 38 NMP. The Commission is the proper authority to take action on this plan, because Luzerne Conservation District is not delegated plan review and action responsibilities under the PA Nutrient and Odor Management Act Program.

A brief description of the operation, concluding with the staff recommendation, is attached. Also attached is a copy of the complete nutrient management plan for the operation.

Thank you for considering this plan for Commission action.

Farm Descriptions

Downs Racing LP. NMP, Luzerne County – The Downs Racing animal operation is a harness racing facility with live horse races from April through November. Horses begin arriving the first week of March for training and races begin at the end of March. Harness races are held 4 days per week. The NMP was written at maximum capacity of 512 standard breed horses for the entire 270 day race season.

Horses are stabled on the operation the majority of the time. Only those horses preparing for a race or actually racing are out of the stables. Approximately 120 horses are racing for 5 hours per day, a maximum of 100 horses practice for 7 hours Monday through Saturday and 12 hours on Sunday. Straw is the primary bedding material for the horses. All collected manure is transferred to roll-off boxes or placed in the proposed manure storage facility. Approximately 4,500 tons of manure is generated per year by the horses on Downs Racing's operation. All the collected manure at Downs Racing is loaded in roll-off containers and exported by Silvana Trucking, Inc. – Franco Giorgio, President (a certified as a Manure Broker 1) and transported to the mushroom industry.

There are no crops, pastureland, or hayland on this operation or under management control of Downs Racing.

The combined animal equivalent units on Downs Racing operation is 416.61. The animal equivalent units per acre for Downs Racing operation are 416.61, classifying this operation as a concentrated animal operation (CAO) under Act 38 of 2005. This operation is also a CAFO.

Needed BMPs listed to be implemented on the Downs Racing include: an existing storm water detention basin will be expanded, the creation of an additional basin for storm water re-use system, one horse stable, the Lasik Barn and an existing manure storage will be decommissioned, the existing horse showers and drains will be decommissions with new shower facilities will be connected to the public sanitary sewer system and a new roofed 80' by 60' by 25' manure storage will be constructed and creation of 5.27 acres of meadow grasses. All the listed BMPs are planned to be completed by the Summer of 2019.

Based on my review, the NMP developed for Downs Racing, LP. – DBA Mohegan Sun at Pocono Downs operation meets the requirements of the PA Nutrient and Odor Management Act and Regulations, and I therefore recommend Commission approval.

Nutrient Management Plan

For Crop Year(s)

2019

2020

2021

Prepared For

Operator's Name, Mailing Address, Telephone Number(s)

DOWNS RACING LP
doing business as – Mohegan Sun at Pocono Downs
1280 Highway 315
Wilkes-Barre, PA 18702
Office: 570-831-2166, Cell: 570-507-0156

Operation's Location Address (if different than above)

Site Name (CAFOs)

DOWNS RACING LP

Prepared By

Nutrient Management Specialist's Name, Address, Telephone Number(s)

EVIN FITZPATRICK
3050 YELLOW GOOSE ROAD
LANCASTER, PA 17601
717.393.2176

Nutrient Management Specialist's Program Certification Number

NMC#2001

Administratively Complete Date

Plan Approval Date

Plan Update Submission Date(s)

(updates to the approved plan not requiring board action)

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 Topographic Map

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Appendix 10: Supporting Information & Documentation (Excel)

(List below the required documents included in the plan.)

- Manure average (100% export plan)
- Signature Authorization Letters
- ARM Group Proposed BMP maps/Corrective Action Plan

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 0

Crop Year(s) 2019, 2020, 2021

Whole Farm Note: Straw bedding manure 100 % export
 If manure runs out for any field, consult Appendix 4 of the plan for that field. The fertilizer required on any part of the field that does not receive manure can be determined from the 'Net Nutrients Required' for that field.

Operation Acres:

Total Acres: 216 Total Acres Available For Nutrient Application Under Operator's Control: Owned: 0 Rented: 0

Animal Equivalent Units: 416.61

Animal Equivalent Units Per Acre: 416.61

| CMU/Field ID | Acres | Crop | Manure Group | Application Season | Application Management | Planned Manure Rate ¹ | Starter/Other Fertilizer (lb/A) | | | Supplemental Fertilizer (lb/A) | | | Nutrient Balance (lb/A) ² | | |
|--------------|-------|------|--------------|--------------------|------------------------|----------------------------------|---------------------------------|-------------------------------|------------------|--------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| NA | NA | | | | | | | | | | | | 0 | | |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NMP Summary Notes

Crop Years 2019, 2020, 2021

| CMU/Field ID | Notes |
|--------------|-------|
| NA | |

¹ See rate calibration table (Nutrient Management Plan Summary Notes).

² Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Manure Spreader Calibration Notes

1

Crop Years 2019, 2020, 2021

| Manure Application Rate | Manure Spreader Used | Spreader Settings | Tractor Used (if applicable) | Tractor Settings (speed, gear, rpm, pto, etc.) |
|-------------------------|----------------------|-------------------|------------------------------|--|
| NA | NA | NA | NA | NA |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Additional Nutrient Management Plan Requirements

Manure Management and Stormwater BMP Implementation Summary

| Best Management Practice | NRCS Practice Code ¹ | BMP Location | Implementation Season & Year |
|---|---------------------------------|--|------------------------------|
| Obstruction Removal | 500 | Stable B & Lasik Barn | Completion date Summer 2019 |
| Waste Facility Closure | 360 | West of Lasik Barn | Completion date Summer 2019 |
| Waste Transfer | 634 | 4 Wash Buildings south of stables, new wash stall building | Completion date Summer 2019 |
| Roofs and Covers | 367 | 4 Wash Buildings south of stables | Completion date Summer 2019 |
| Pond | 378 | Stable B | Completion date Summer 2019 |
| Irrigation Reservoir | 436 | Stable B | Completion date Summer 2019 |
| Pond Sealing or Lining, Flexible Membrane | 521A | Stable B | Completion date Summer 2019 |
| Drainage Water Management | 554 | Stable B | Completion date Summer 2019 |
| Stormwater Runoff Control | 570 | Stable B | Completion date Summer 2019 |
| Structure for water control | 587 | Stable B | Completion date Summer 2019 |
| Subsurface Drain | 606 | Stable B | Completion date Summer 2019 |
| Underground Outlet | 620 | Stable B | Completion date Summer 2019 |
| Conservation Cover: Erosion Control/Water Quality | 327 | Surrounding Lasik Barn and south of Stable B | Completion date Summer 2019 |
| Critical Area Planting | 342 | Surrounding Lasik Barn and south of Stable B | Completion date Summer 2019 |
| Riparian herbaceous Cover | 390 | Surrounding Lasik Barn and south of Stable B | Completion date Summer 2019 |
| Forage and Biomass Planting | 512 | Surrounding Lasik Barn and south of Stable B | Completion date Summer 2019 |
| Sediment Basin | 350 | Northwest of Stable B | Completion date Summer 2019 |
| Waste Transfer | 634 | New wash stall building | Completion date Summer 2019 |
| Pond Sealing & Lining, Compacted Soil Treatment | 520 | Stable B | Completion date Summer 2019 |

| | | | |
|-------------------------|-----|----------------------------------|-----------------------------|
| Proposed Manure storage | 313 | ~400 ft east of existing storage | Completion date Summer 2019 |
|-------------------------|-----|----------------------------------|-----------------------------|

1 If applicable, enter USDA-NRCS Practice Code. For other non-technical BMPs, leave blank.

In-Field Manure Stacking Procedures

Manure must be applied to the field within 120 days of stacking or the stacks must be covered. Stacks must be implemented and maintained according to sound BMPs, addressing concerns such as soil type, soil slope, shape of the pile, setbacks, and rotation of piles.

No in field stacking of manure at this operation

Additional CAFO Requirements

In-field stacking criteria, winter storage requirements, and other issues identified by DEP’s review of the nutrient management plan.

In-field stacking criteria- Manure may not be stacked in crop fields on this operation for greater than 14 day without covering the stack with an impermeable cover to keep rainwater from falling on the pile. Manure will be stored in the proposed manure storage facility. Roofed manure storage facility with Concrete pad covered structure concrete sides, 80’ X 60’ X 25’, stacked 10’ high with storage volume of 48,000 cu ft, located on map

Manure Storage Winter Capacity Planning Level- Manure storage will be cleaned out by December 15th, Operation will not be storing manure over the winter. Animals are offsite during the winter months.

Proposed Manure Storage Description

Type, dimensions, volume, freeboard and location on map.

Manure storage facility with Concrete pad covered structure concrete sides, 80’ X 60’ X 25’, stacked 10’ high with storage volume of 48,000 cu ft, located on map. The proposed manure storage facility is sized appropriately for the operation.

Description of Planned Alternative Manure Technology Practices

Type of practice, volume of manure addressed, and result of practice.

NA

Exported Manure Summary

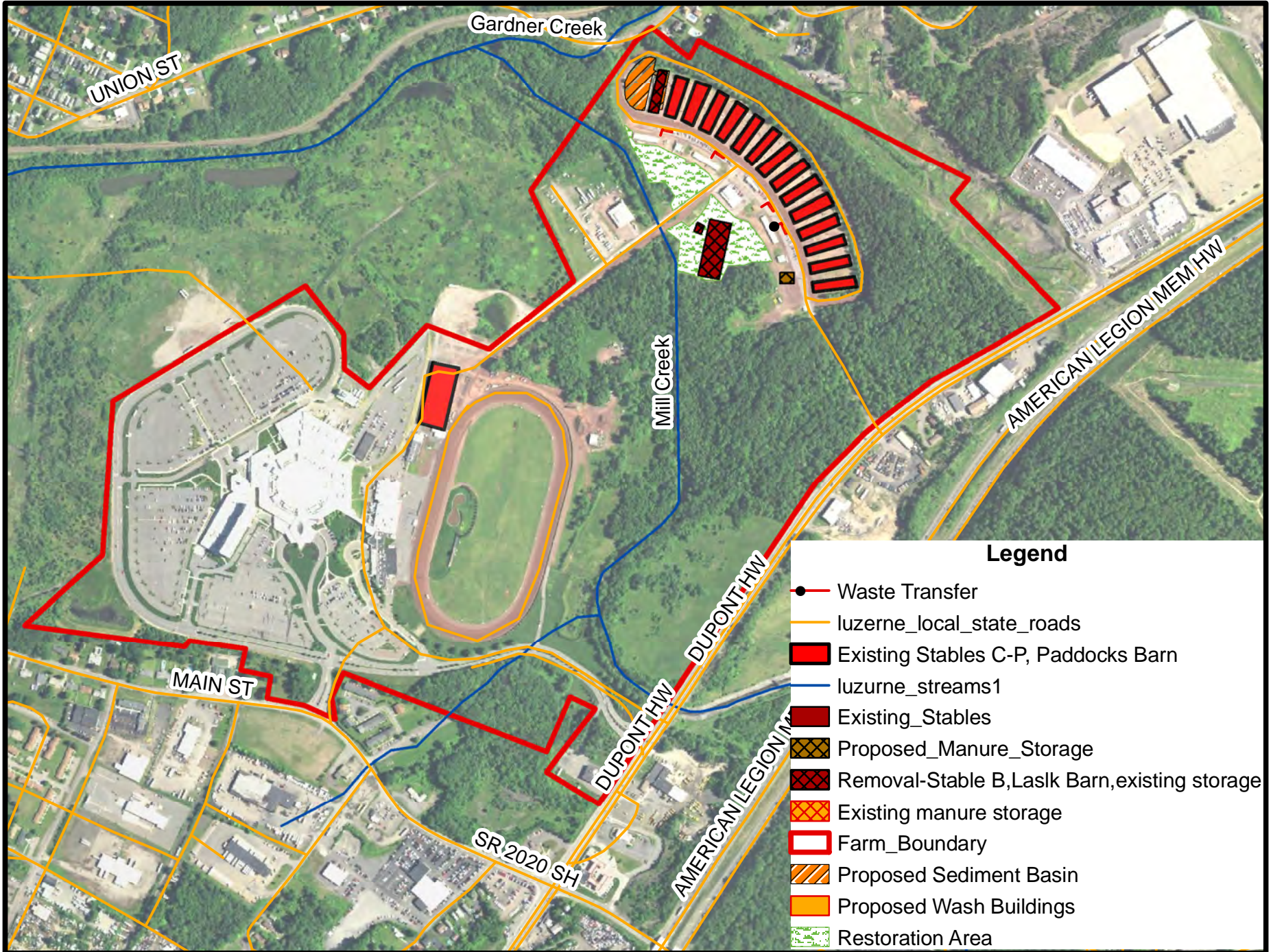
Summarize in a short paragraph the arrangements proposed for the manure to be exported from the operation. This information is described in more detail in Appendix 8 of this plan.

Straw bedding comingled with horse manure produced on this operation is exported through a broker (Silvana Trucking, Inc.). Silvana Trucking is committed in taking the full amount of straw manure throughout the year.

Operator Management Map

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Operator Management Map** is to be included here in the Nutrient Management Plan Summary and must include field identification, acreage and boundaries, manure application setback areas and buffers and associated landscape features (streams and other water bodies, sinkholes and active water wells), location of existing and proposed structural BMPs (including manure storage facilities), location of existing or proposed emergency manure stacking areas and in-field manure stacking areas, and road names adjacent to and within the operation. All features on the map must be clearly identified and include a legend for setback areas and other features. The Topographic Map and Soils Map must be included in Appendix 9.

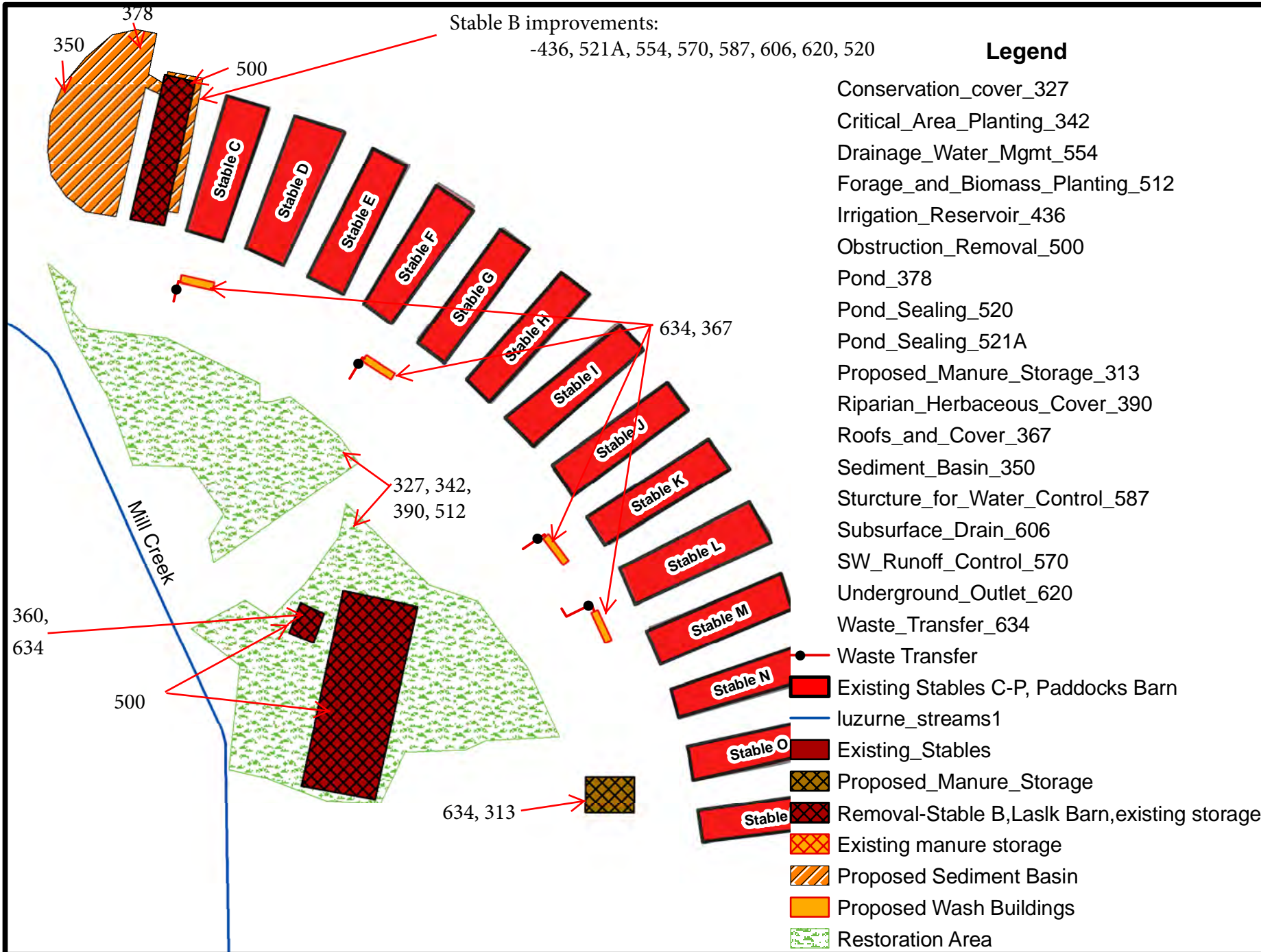
NMP SITE MAP - Downs Racing LP dba Mohegan Sun at Pocono Downs



1,100 550 0 1,100 Feet



NMP NRCS PRACTICE CODE MAP - Downs Racing LP dba Mohegan Sun at Pocono Downs



Appendix 1

Nutrient Management Plan Agreement & Responsibilities

Plan Implementation Requirements

This nutrient management plan has been developed to meet the requirements of the following programs:

Form with checkboxes for Pennsylvania Act 38 of 2005, Pennsylvania CAFO, and Other program.

Plans developed under these programs are required to be implemented as approved in order to maintain compliance with the specific law or program.

The nutrient management plan has been developed as a: (check one)

Form with checkboxes for 1-Year Plan for Crop Year and 3-Year Plan for Crop Years.

Records required to be maintained include the following:

- 1) Annual crop yields
2) Manure and fertilizer application rates, locations and date of application
3) Manure production figures for the various manure groups listed in your plan
4) Soil test reports (testing required every 3 years per crop management unit)
5) Manure test reports (testing required once a year for each manure group)
6) Number of animals on pasture, number of days on pasture, and hours per day on pasture
7) For operations exporting manure, Manure Export Sheets
8) BMP designs and certification for new liquid and semi-solid manure storage facilities

The following has been confirmed:

Form with checkboxes for Verification of Ag E&S Plan and Verification of Existing Site Specific Emergency Response Plan.

Verification that owners of rented/leased lands have been notified that a nutrient management plan has been developed which calls for manure to be applied to their lands and that they have no objections to the plan requirements.

Form with checkboxes for Owners Notified and No Rented/Leased Lands.

Specialist Signature

I affirm that the information contained in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, based on information provided by the operator; that this plan has been developed in accordance with the criteria established for the program(s) indicated above; and that I have presented the final complete plan to the operator and discussed the content and implementation of this plan with the operator, subject to the penalties of 18 Pa.C.S.A. § 4904, relating to unsworn falsification to authorities.

Specialist Signature

Handwritten signature in blue ink.

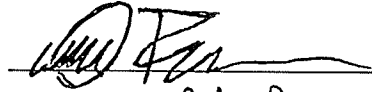
Date

9/20/2018

Operator Signature

I understand and agree that I will implement the practices, procedures and record keeping obligations as outlined in this plan in order to protect water quality and address the nutrient needs of the crops associated with the operation. I agree that if I use a commercial hauler or broker for the application or export of manure, that only haulers or brokers that hold a valid certification issued by the Pa Department of Agriculture, under Act 49 of 2004, will be used. I affirm that all information provided in this nutrient management plan is true, accurate and complete to the best of my knowledge and belief, and reflects the current and planned activities of the operation; and that, if this plan was completed by a nutrient management specialist, I have reviewed the final completed plan and the specialist has discussed the content and implementation of this plan with me, subject to the penalties of 18 Pa.C.S.A. § 4904, relating to unsworn falsification to authorities.

Operator Signature



Operator Title

VP Racing , Dale Rapson

Date

9/20/2018

Appendix 2

Operation Information

Operation Description

Animal types and numbers; cropland, hayland and pastureland acreage; farmstead acreage; crop rotation (crops, sequence of crops, and number of years for each crop); manure group management, including atypical manure (contributing animal groups, collection, storage and handling procedures); mortality composting management.

Pocono Downs is a harness racing track with live races from April to November. Horses begin arriving the first week of March for training and races begin the end of March and are held 4 days a week. This plan is being written for a 512 horse maximum capacity across all stalls for the entire 270 day racing season. Straw bedding is the primary bedding materials. The horses are always stabled except for approximately 120 horses racing for 5 hours each race day, a maximum of 100 horses practicing for 7 hours Monday through Saturday and 12 hours on Sunday. All collected manure, including straw is exported from this operation to a broker. There are no crops, pastureland or hayland on this operation. There is 216 acres of farmstead. At the stables on the backside, manure is temporarily stored in 6' X 4' X 4' 3- sided metal containers with floor and lid. There are approximately 5 of these containers per stable. There are emptied throughout the day into truck containers. Manure from the race track and practice track and animal walkways will be removed on a daily based and placed in the manure storage. The Paddock barn manure is removed on a daily basis or on an as needed basis. If the Paddock barn stables are bedded with straw, the manure is transferred to the onsite manure storage facility. Sub-samples are taken from various storage containers throughout the facility of the straw manure. Horses that die during a race are taken to a facility for autopsy and disposal. If a horse dies while not racing, it is removed by a rendering company.

County(s)

Luzerne

Name of Receiving Stream(s)/Watershed(s)

Mill Creek

Notation of Special Protection Waters

None

Operation Acres

Total Acres: 216

Total Acres Available for Nutrient Application Under Operator's Control

Owned: 0

Rented: 0

Names & Addresses of Owners of Rented or Leased Land

NA

Existing Manure Storages & Capacity

Type of storage, dimensions, useable capacity, freeboard, top or bottom loaded, dimensions and description of contributing runoff area, description of wastewater additions, types and amounts of bedding. Briefly describe, for each manure group, manure storage management during removal (degree of agitation, method of manure removal, extent the storage is emptied, type of unremoved manure, etc.) and manure sampling procedures.

Approximately 3 truck containers 40 ' X 8 ' X 6 ' with a capacity of 22 tons are utilized. Sub-samples are taken from various storage containers throughout the facility of the straw manure. The existing manure storage is proposed to be removed. The proposed manure storage will replace the existing manure storage facility and a description is as follows: Manure storage facility with Concrete pad covered structure concrete sides, 80' X 60' X 25', stacked 10' high with storage volume of 48,000 cu ft, located on map .

Manure Application Equipment Capacity & Practical Application Rates

Description of application equipment, practical application rates based on calibration and calibration method used, the data recorded during equipment calibration is to be retained on the farm. If applicable, name and Act 49 certification number of custom applicator.

No manure is applied to this operation. All of the manure is loaded by the broker onto his trucks. The broker is a licensed and certified manure hauler as regulated under Pennsylvania's Act # 49 Manure Haulers Regulations.

| Appendix 3 Manure Group Information Crop Yrs. 2019, 2020, 2021 | | Horse manure with straw bedding | |
|--|---------------------------------|--|--|
| Manure Report Date (note if averaging several reports) | April 3, 2018 | | |
| Laboratory Name | Waypoint | | |
| Manure Type | Other | | |
| Manure Unit (lbs/ton or 1000 gal) | lb/ton | | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 8.00 | | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 1.60 | | |
| Total Organic N (lbs/ton or 1000 gal) | 6.40 | Go to NMP Index | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 12.00 | Go to Appendix 3 Input | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 6.00 | Go to Manure Avg Input | |
| Percent Solids | 28.00 | Grazing Calculator | |
| PSC Value (analytical or book value) | 0.80 | | |
| Percent Moisture | 72.00 | | |
| Manure Group AEU's | 416.61 | | |
| Description: Site & Season Applied | Proposed Manure storage | 100% export | |
| Inventory Method | Records | | |
| | Collected Calc. | Uncollected Calc. | |
| Manure Group Identification | Horse manure with straw bedding | | |
| CALCULATED: Total Manure Collected Per Manure Group Units | | | |
| RECORDS: Total Manure Collected Per Manure Group Unit | 4,500.0 | | |
| | tons | | |
| Manure Used On-Farm Units | Collected 0.0 Tons | Uncollected 0.0 | |
| Manure Exported Units | 4,500.0 tons | | |
| Manure Allocation Balance Units | 0.0 Tons | 0.0 | |
| Manure Balance as a Percent of Total Manure Collected | 0.0% | | |
| Total Rainfall and Runoff | 0 | | |
| | tons | | |

| Appendix 3 Manure Group Information Crop Yrs. 2019, 2020, 2021 | | Horse manure with straw bedding |
|---|------------------------------------|---|
| | Manure Generation per Animal Group | Uncollected Manure: Nutrient Analysis Book Values |
| Animal Group 1 | Race Horse (straw) | |
| Animal Type | Light Horse Mature | |
| Animal Number | 440 | |
| Animal Weight | 1100 | |
| Animal Group AUs | 484.00 | |
| Animal Group AEUs | 358.03 | |
| Daily Manure Production per AU | 55.0 | |
| Total Days Manure Produced | 270 | |
| Total Manure Produced | | |
| Days On Pasture | 0 | |
| Hours Per Day On Pasture | 0 | |
| Total Bedding | | |
| Total Washwater | | |
| CALCULATED - Total Uncollected Manure Per Animal Group | | |
| CALCULATED-Total Manure Collected Per Animal Group | | |
| | App 3 Input | |

| | | |
|--|-----------------------------|--|
| Animal Group 2 | Paddock Barn "Ship In" | |
| Animal Type | Light Horse Mature | |
| Animal Number | 72 | |
| Animal Weight | 1100 | |
| Animal Group AUs | 79.20 | |
| Animal Group AEUs | 58.59 | |
| Daily Manure Production per AU | 55.0 | |
| Total Days Manure Produced | 270 | |
| Total Manure Produced | | |
| Days On Pasture | 0 | |
| Hours Per Day On Pasture | 0 | |
| Total Bedding | | |
| Total Washwater | | |
| CALCULATED - Total Uncollected Manure Per Animal Group | | |
| CALCULATED-Total Manure Collected Per Animal Group | | |
| | App 3 Input | |

| | | | |
|--|--------------------------|-------|--------|
| App. 4: Crop Yrs. 2019, 2020, 2021 | NA | | |
| CMU/Field ID | | | |
| Acres | NA | | |
| Soil Test Report Date | NA | | |
| Laboratory Name | NA | | |
| Soil Test Levels (Mehlich-3 P & K) (Show conversions to ppm in Appendix 10) | ppm P | ppm K | pH |
| P Index Part A Evaluation | | | |
| Part A Result | | | |
| Crop | | | |
| Planned Yield | | | |
| PSU Soil Test Recommendation (lb/A) | N | P2O5 | K2O |
| User Soil Test Recommendation (lb/A) | | | |
| Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure) | | | |
| P Index Application Method | | | |
| Double Crop CarryOver N (lb/A) | 0 | | |
| Manure History Description Residual Manure N (lb/A) | | | |
| Legume History Description Residual Legume N (lb/A) | 0 | | |
| Net Nutrients Required (lb/A) | | | |
| Manure Group | | | |
| Application Season: Management (Incorporation, cover crops, etc.) | | | |
| Availability Factors (Total N or NH4-N & Organic N) | Total N | NH4-N | Org. N |
| P Index Application Method | | | |
| N Balanced Manure Rate (ton; gal/A) | | | |
| P Removal Balance Manure Rate (ton or gal/A; If required by P Index) | Crop P Removal (lb/A) | | |
| P Index Value | #VALUE! | | |
| Planned Manure Rate (ton or gal/A) | No Manure Applied | | |
| Nutrients Applied at Planned Manure Rate (lb/A) | 0 | 0 | 0 |
| Nutrient Balance after Manure | | | |
| Supplemental Fertilizer (lb/A) | 0 | 0 | 0 |
| P Index Application Method | | | |
| Final Nutrient Balance (lb/A) | 0 | | |
| Multiple Application | | | |
| Manure Utilized on CMU | | | |

Appendix 5 - P Index

Crop Yrs. 2019, 2020, 2021

No P Index Part B fields in this Plan

Pennsylvania P Index Version 2

[Go to NMP Index](#)

[Go to App 4 Input](#)

| PART A: SCREENING TOOL CMU/Field ID | | PART A: SCREENING TOOL | | | | CMU/Field ID |
|---|--|---|---|---|---|---|
| Is the CMU in a Special Protection watershed? | | Is the CMU in a Special Protection watershed? | | | | If the answer is Yes to <u>any</u> of these questions, Part B must be used. |
| A significant farm management change as defined by Act 38? | | Is there a significant farm management change as defined by Act 38? | | | | |
| Soil Test Mehlich 3 P greater than 200 ppm P? | | Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P) | | | | |
| Contributing Distance from CMU to receiving water <150 ft.? | | Is the Contributing Distance from this CMU to receiving water less than 150 ft.? | | | | |
| Is winter manure application planned for this field ? | | Is winter manure application planned for this field ? | | | | |
| Run P Index Part B voluntarily? (No to all Part A questions.) | | Run P Index Part B voluntarily? (Answers are No to all Part A questions.) | | | | |
| PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P) | | Mehlich 3 Soil Test P (ppm P) | | | | |
| Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P) | | | | | | |
| FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other) | | | | | | Fertilizer P (lb P2O5/acre) |
| P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARDLESS OF MANURE ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | |
| SUPPLEMENTAL P FERTILIZER | | | | | | Fertilizer P (lb P2O5/acre) |
| P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | |
| Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method | | | | | | |
| MANURE P RATE | | | | | | Manure P (lb P2O5/acre) |
| MANURE APPLICATION METHOD ³ | 0.2 Placed or injected 2" or more deep | 0.4 Incorporated <1 week following application | 0.6 Incorporated > 1 week or not incorporated following application in April - October | 0.8 Incorporated >1 week or not incorporated following application in Nov. - March | 1.0 Surface applied to frozen or snow covered soil | |
| P SOURCE COEFFICIENT ³ | Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1 | | | | | |
| Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient | | | | | | |
| Source Factor Sum | | | | | | |
| PART B: TRANSPORT FACTORS | Soil Loss (ton/acre/yr) | | | | | |
| EROSION | | | | | | |
| RUNOFF POTENTIAL | 0 <i>Drainage Class is Excessively</i> | 2 <i>Drainage Class is Somewhat Excessively</i> | 4 <i>Drainage Class is Well/Moderately Well</i> | 6 <i>Drainage Class is Somewhat Poorly</i> | 8 <i>Drainage Class is Poorly/Very Poorly</i> | |
| SUBSURFACE DRAINAGE | 0 None | | 1 Random | | 2 ¹ Patterned | |
| CONTRIBUTING DISTANCE | 0 > 500 ft. | 2 350 to 500 ft. | 4 200 to 349 ft. | 6 100 to 199 ft. OR < 100 ft. with 35 ft. buffer | 9 ² < 100 ft. | |
| Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance | | | | | | |
| MODIFIED CONNECTIVITY | 0.85 50 ft. Riparian Buffer APPLIES TO DIST < 100 FT | | 1.0 Grassed Waterway or None | 1.1 Direct Connection APPLIES TO DIST > 100 FT | | |
| Transport Sum x Modified Connectivity / 24 | | | | | | |
| P Index Value = 2 x Source x Transport | | | | | | |
| Low: 59 or less Nitrogen based management | Medium: 60 to 79 Nitrogen based management | High: 80 to 99 Phosphorus limited to crop removal | Very High: 100 or greater No Phosphorus applied | | | |

1 OR rapidly permeable soil near a stream

2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Appendix 6
Manure Management

Date of Site Evaluation: 9/13/2018, 4/3/2018

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated.

ACA alongside access road, Stables (backside), practice track, sediment basin, manure storage areas and paddock barns.

Identification of Inadequate Manure Management Practices and Conditions

List of each specific inadequate manure management practice or condition identified.

Spilled manure around storages. Animal Concentration area discovered, All manure around storage facilities should be picked up or cleaned up daily.

BMPs to Address Manure Management Problem Areas

List of specific BMPs (including PA Technical Guide standard name and number) and management changes that will be implemented to address each of the inadequate practices listed above.

All spilled manure around storage facilities should be picked up or cleaned up daily. Keep manure within the designed manure storage facility. Animal Concentration area was reseeded with grass and fencing was removed.

Appendix 7 Stormwater Control

Date of Site Evaluation: 9/13/2018, 4/3/2018

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated.

All storm water facilities which include: the infield of the main racetrack, other storm water facilities located outside the track, Sediment basin on the backside, northwest of stable B

Identification of Critical Runoff Problem Areas

List of each specific critical runoff problem area identified.

Sediment basin is not functioning properly with red clay material remaining in suspension.

BMPs to Address Critical Runoff Problem Areas

List of BMPs (including PA Technical Guide standard name and number) and specific management changes that will be implemented to address each of the critical runoff problem areas listed above.

All BMPs will be installed by Summer of 2019. Stable B and Lasik barn will be removed (500). The concrete manure storage will be removed (360). All wash pads at remaining stables C-P will be capped and sealed while 4 new roofed wash areas will be constructed to outlet to the city sewer (634, 367). A water reuse system will be installed (378, 436, 520, 521A, 554, 570, 587, 606, 620) to transfer stormwater to a lined impoundment. Topsoil will be replaced and meadow grasses planted on 5.27 acres (327, 342, 390, 512). The sediment basin (350) will be enlarged. The sediment basin (350) will be operated and maintained on an ongoing basis.

Appendix 8
Importer/Broker Agreements & NBSs

Nutrient Balance Sheets are not required for importers that have an approved Nutrient Management Plan.

Exporter/Broker Agreement

Developed consistent with the PA Nutrient and Odor Management Act Program

- 1) This agreement is entered into on February 7, 2017, by
The Downs Racing, LP (the "exporter") who will supply manure, and
Silvana Trucking, Inc. (the "broker") who will receive the manure from the
exporter.
- 2) The purpose of this agreement is to set forth the mutual responsibilities and understanding of
the parties with respect to the export of manure from the exporter to the broker.
- 3) The exporter is located at (county, twp, and address): 1280 Highway 315, Wilkes-Barre, PA
Plains Township, Luzerne County
- 4) The exporter will, as the supply of manure allows, provide the following amounts of manure during
the seasons outlined below:
Tons of (Species) manure, per season:
Spring 1,500 Summer 1,500 Fall 1,500 Winter -0-
Gallons of (Species) manure, per season:
Spring _____ Summer _____ Fall _____ Winter _____
Total planned manure exported: (supply of manure may be less than what is planned)
Tons of (Species) manure: _____
Gallons of (Species) manure: _____
If multi-species are planned, please add additional lines:
- 5) The broker's contact information is as follows:
 - a) Name: Silvana Trucking, Inc.
 - b) Address: PO Box 63, Rehrersburg, PA 19550
 - c) Telephone number: 610-656-9821
 - d) PDA Manure Broker Certification number: 811-MB1
- 6) The Broker agrees to maintain their status as a certified Commercial Manure Broker as provided
under Pa's Commercial Manure Hauler and Broker Certification Program (7 Pa Code Chapter 130e).
- 7) The Broker agrees to comply with all requirements established by section 5 of the
Commercial Manure Hauler and Broker Certification Act regarding the development and


distribution of nutrient balance sheets to importing operations and conservation districts when handling manure from a CAO, CAPO or volunteer operation. Specifically, where a broker under this agreement, makes arrangements for land application of the manure on an importing agricultural operation, the broker must:

- a. Provide a NBS to all importing operations receiving manure for land application, no later than the time of manure transfer
- b. Provide copies of the NBS, no later than the time of manure transfer, to the county conservation district where the manure originated (exporting operation county)
- c. Provide copies of the NBS, no later than the time of manure transfer, to the county conservation district where the manure is being applied (importing operation county)

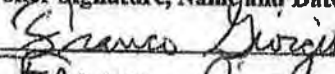
Where a broker under this agreement, arranges for the use of manure for purposes other than land application, the broker is not required to supply a NBS to the importing operation

- 8) The exporter will use a Manure Export Sheet to record all manure exported to the broker. These Manure Export Sheets are available from the county conservation district or the State Conservation Commission. Computer generated forms other than the manure export sheet may be used if they contain the same information as, and are reasonably similar in format to, the forms available from the State Conservation Commission or the conservation district.
- 9) This agreement shall remain in full effect unless terminated by either party upon thirty days prior written notice to the other party. If this agreement is terminated, the exporter shall notify the county conservation district office that approved their nutrient management plan, of the termination.
- 10) By signing this agreement, the broker accepts full responsibility for the manure received from the exporter as long as the manure is under the broker's control, including handling, storage and land application.

Exporter Signature, Name and Date

 (signature)
Dale Rapson (name)
February 7, 2017 (date)

Broker Signature, Name and Date

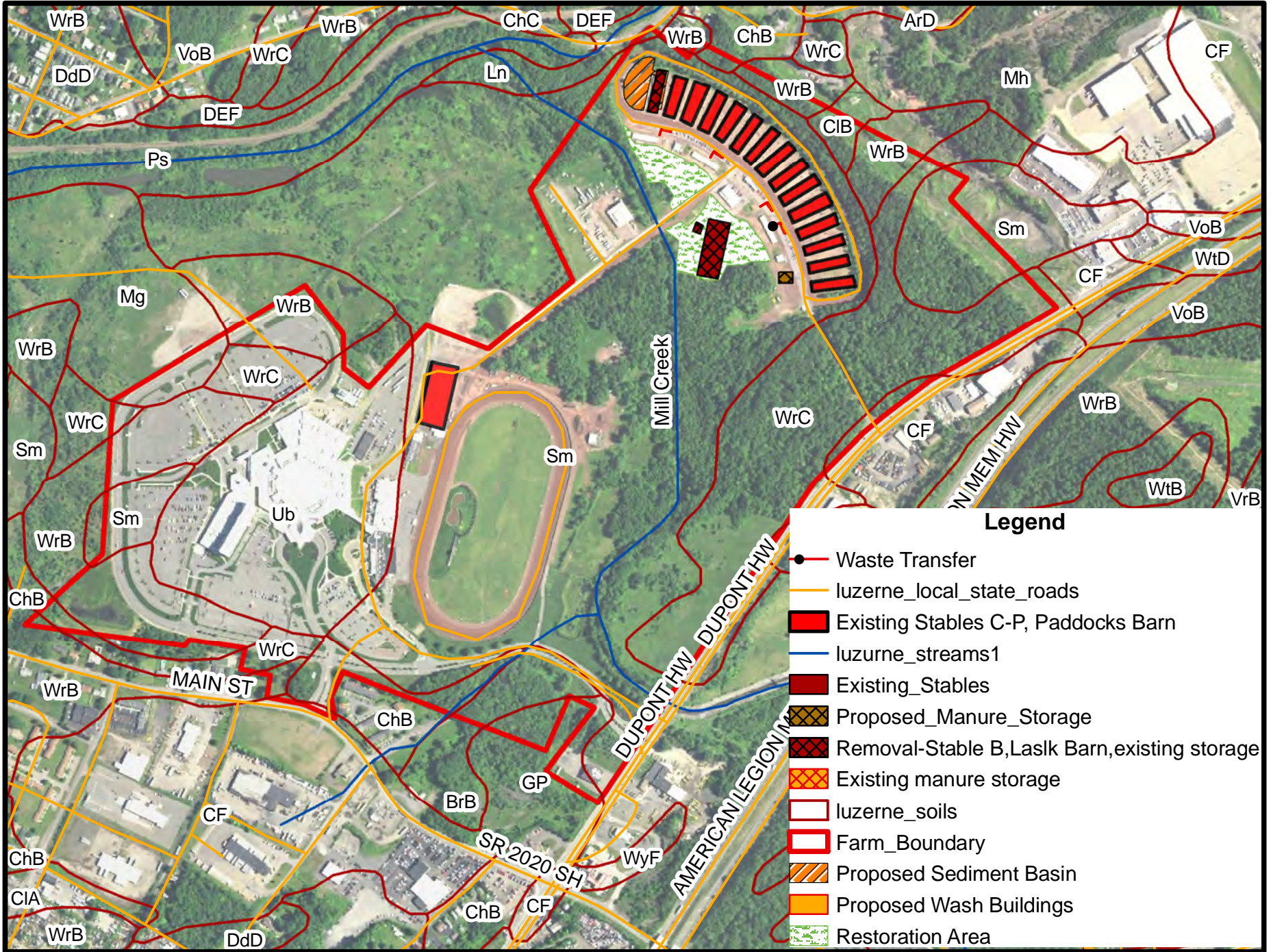
 (signature)
FRANCO GIORGIO (name)
Feb 14th 2017 (date)

Appendix 9

Operation Maps

Three types of maps are required for an Act 38 Nutrient Management Plan: 1) Topographic Map, 2) Soils Map, and 3) Operator Management Map. The **Topographic Map and Soils Map** must be included here. The Topographic map must be drawn to scale and identify the land included in the plan with operation boundaries. The Soils Map must include the field identification and boundaries, soil types and slopes with soil legend. Adding P Index lines can be helpful on the Topographic or Soils map but are not required. The Operator Management Map must be included in the Nutrient Management Plan Summary.

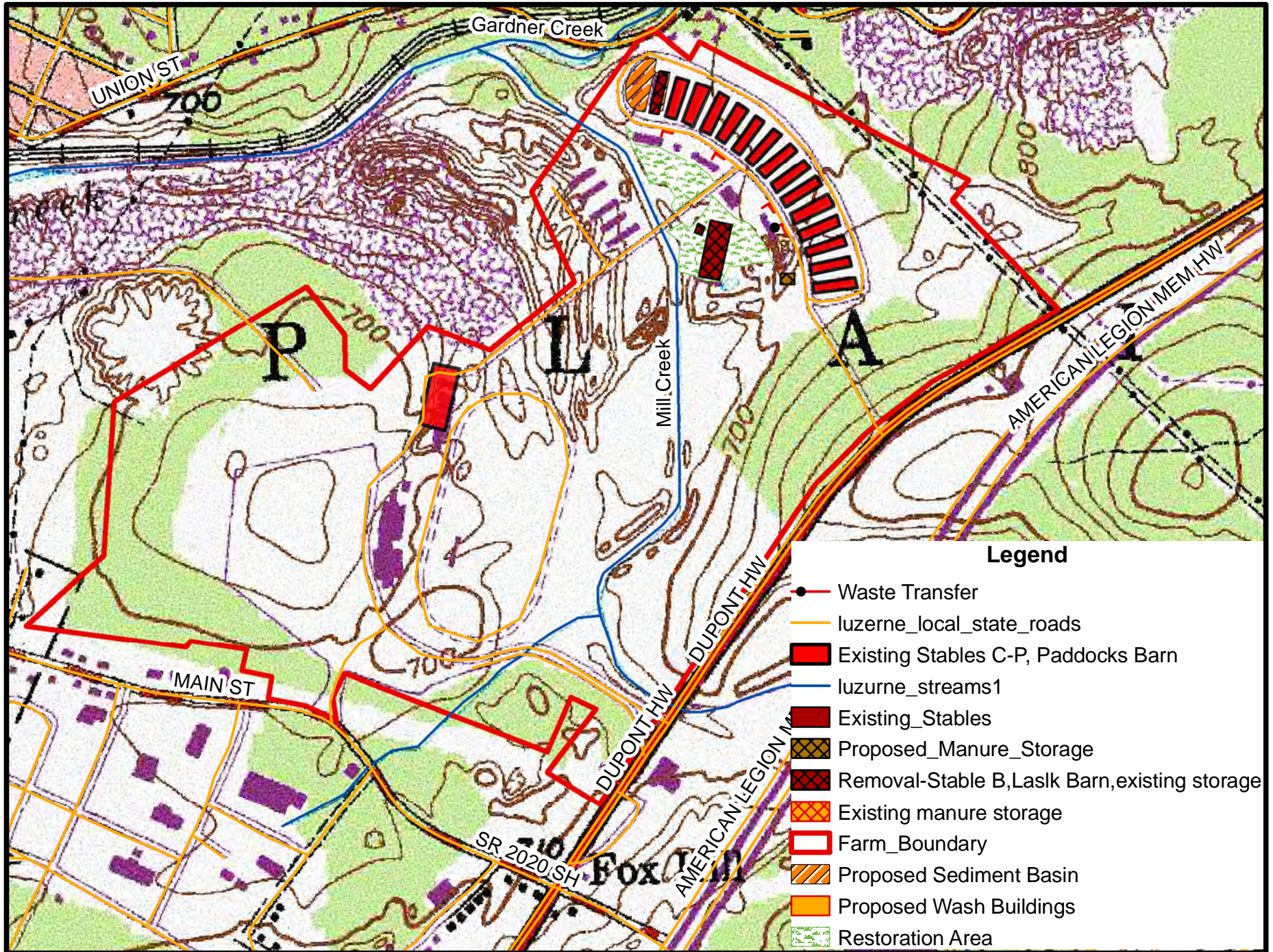
NMP SOIL MAP - Downs Racing LP dba Mohegan Sun at Pocono Downs



1,100 550 0 1,100 Feet



NMP TOPO MAP - Downs Racing LP dba Mohegan Sun at Pocono Downs



Legend

- Waste Transfer
- luzerne_local_state_roads
- Existing Stables C-P, Paddocks Barn
- luzerne_streams1
- Existing_Stables
- Proposed_Manure_Storage
- Removal-Stable B, Laslk Barn, existing storage
- Existing manure storage
- Farm_Boundary
- Proposed Sediment Basin
- Proposed Wash Buildings
- Restoration Area



1,100 550 0 1,100 Feet



Supporting Information & Documentation

Includes if applicable the Rainfall Additions Worksheet, Winter Application Matrix, Residual N Calculation Worksheet and other supplemental worksheets included in the NMP Spreadsheet. Attach information and documentation necessary to support plan content not included elsewhere in the NMP Spreadsheet or appendices. Examples include, but are not limited to, documentation of animal weights if Agronomy Facts 54 is not used, bedding calculations, or calculations for irrigation rates.

| Manure Analysis 5 Year Running Average | | | | | | |
|--|---------------------------------|-------------|-------------|-------------|-------------|-------------|
| Manure Average for Crop Years. 2019, 2020, 2021 | Horse manure with straw bedding | | | | | |
| | Average | 1 year ago | 2 years ago | 3 years ago | 4 years ago | 5 years ago |
| Manure Report Date | Apr 03 2018 | Apr 03 2018 | | | | |
| Laboratory Name | Waypoint | Waypoint | | | | |
| Manure Type | Other | Other | | | | |
| Manure Unit (lbs/ton or 1000 gal) | lb/ton | lb/ton | | | | |
| Total Nitrogen (N) (lbs/ton or 1000 gal) | 8.00 | 8.00 | | | | |
| Ammonium N (NH ₄ -N) (lbs/ton or 1000 gal) | 1.60 | 1.60 | | | | |
| Total Organic N (lbs/ton or 1000 gal) | 6.40 | 6.40 | | | | |
| Total Phosphate (P ₂ O ₅) (lbs/ton or 1000 gal) | 12.00 | 12.00 | | | | |
| Total Potash (K ₂ O) (lbs/ton or 1000 gal) | 6.00 | 6.00 | | | | |
| Percent Solids | 28.00 | 28.00 | | | | |
| PSC Value (Enter analytical or book value) | 0.80 | 0.80 | | | | |

September 18, 2018

Re: Signatory Authority for Mohegan Commercial Ventures-PA, LLC

Dear Sirs:

Downs Racing, L.P., d/b/a Mohegan Sun Pocono ("MSP") previously issued a letter signed by Anthony Carlucci, President and General Manager indicating that Dale Rapson was authorized to sign on a limited basis, documents concerning the Nutrient Treatment Plan on behalf of MSP. Subsequently we learned that your agency was requesting a letter on the letterhead of Mohegan Commercial Ventures-PA, LLC. Attached hereto, and only for the limited purpose of this project, please find a copy of a Consent Resolution of the Managers of Mohegan Commercial Ventures-PA, LLC which appoints Anthony Carlucci as President of each of the Pennsylvania Partnerships and is therefore authorized to take all appropriate actions to execute all notices, documents, contracts and instruments which are necessary....

By virtue of the foregoing as set forth more fully in the attached resolution, the letter of Mr. Carlucci, which was previously submitted is dully authorized by Mohegan Commercial Ventures-PA, LLC.

MSP respectfully request that the attached Resolution be kept confidential. If I can be of any further assistance in this matter please feel free to contact my office.

Very truly yours,



Michael C. Epps, Esq.
Vice President of Legal & Compliance



**UNANIMOUS WRITTEN CONSENT OF THE MANAGERS
OF MOHEGAN COMMERCIAL VENTURES-PA, LLC**

The undersigned, comprising all of the Managers of Mohegan Commercial Ventures-PA, LLC (the "Company"), hereby consent to and approve the resolutions, matters and actions set forth below without the necessity of calling to order a meeting of the Managers pursuant to Article VIII of the Operating Agreement of the Company, as the same has been amended from time to time ("Operating Agreement"):

RESOLVED, that the Company, as the General Partner of the following limited partnerships: Downs Racing, L.P., Northeast Concessions, L.P., Mill Creek Land, L.P. and Backside, L.P. (individually or collectively, the "Pennsylvania Partnership(s)"), is authorized pursuant to Section 5.1 of each Amended and Restated Limited Partnership Agreement of the Pennsylvania Partnerships, each of which is dated as of January 25, 2005 (individually or collectively the "Partnership Agreement(s)") to manage and control the business of the Pennsylvania Partnerships including, but not limited to, the appointment of any individual as an officer of each Pennsylvania Partnership;

RESOLVED, that the Company and its Managers hereby appoint Anthony Carlucci as President and General Manager of each of the Pennsylvania Partnerships, to hold such office until such time as he is removed or replaced in accordance with the Partnership Agreements;

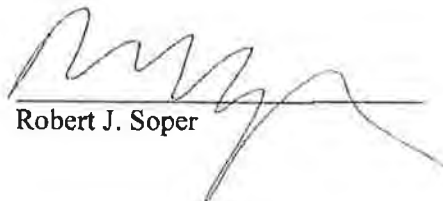
RESOLVED, that any Manager or Officer of the Company is authorized to take all appropriate actions and to execute all notices, documents, contracts and instruments which are necessary and appropriate to carry-out the resolutions adopted hereby; and

RESOLVED, that this written action may be executed in one or more counterparts and signatures submitted via facsimile or portable document format (".pdf") shall be deemed to have the same force and effect as an original signature.

IN WITNESS WHEREOF, the undersigned have duly executed this consent effective as of the 12th day of August, 2016.



Kevin P. Brown



Robert J. Soper



April 6, 2018

Evan Fitzpatrick
Red Barn Consulting, Inc.
3050 Yellow Goose Road
Lancaster, PA 17601

Re: Nutrient Management Plan

Dear Mr. Fitzpatrick,

My name is Anthony Carlucci and I am President of Downs Racing, LP. It is my understanding that there are certain documents to be executed in furtherance of approval of our Nutrient Management Plan amendment. Please be advised that I hereby authorize Dale Rapson to execute any and all documents necessary for the limited purpose of compliance with the Act 38 Nutrient Management Plan and Odor Management Plan.

Very truly yours

A handwritten signature in black ink, appearing to read "Anthony Carlucci".

Anthony Carlucci
President





- NOTES:**
1. THE BASE MAP HAS BEEN CREATED USING AVAILABLE AERIAL PHOTOGRAPHY PROVIDED BY PAMAP TILES USGS EARTHSTAR GEOGRAPHICS. EXISTING TOPOGRAPHY HAS BEEN CREATED USING SURVEY PERFORMED BY CLOUGH HARBOUR & ASSOCIATES LLP (OCTOBER 2005).
 2. PROPERTY LINES AND OWNER INFORMATION ARE TAKEN FROM EXISTING SURVEY PERFORMED BY CLOUGH HARBOUR & ASSOCIATES LLP (OCTOBER 2005).
 3. THIS PLAN IS IN THE PENNSYLVANIA STATE PLANE NORTH, NORTH AMERICAN DATUM 1983 (NAD 83) COORDINATE SYSTEM.

LEGEND
NOTE: LEGEND IS TYPICAL, NOT ALL OBJECTS IN LEGEND APPEAR IN PLAN.

| | |
|--|--|
| | EXISTING CONTOURS |
| | EXISTING WETLANDS |
| | EXISTING PROPERTY LINE |
| | EXISTING WATERLINE |
| | EXISTING SEWERLINE |
| | EXISTING GASLINE |
| | EXISTING STORMWATER PIPE |
| | EXISTING TREELINE |
| | EXISTING MAPPED WATERCOURSE |
| | FEMA FLOODWAY (APPROXIMATE 50' FROM TOP OF BANK) |
| | EXISTING FENCE |
| | EXISTING UTILITY POLE |
| | PROPOSED CONTOURS |
| | PROPOSED 12" FILTER SOCK |
| | PROPOSED 18" FILTER SOCK |
| | PROPOSED 24" FILTER SOCK |
| | PROPOSED 32" FILTER SOCK |
| | PROPOSED EROSION CONTROL PRODUCT |
| | PROPOSED CHANNEL |
| | PROPOSED CHAIN LINK FENCE |
| | LIMIT OF DISTURBANCE |
| | NPDES BOUNDARY |
| | PROPOSED CULVERT |



| | | | |
|-------------|-----|---------------|---------------|
| Prepared by | MDB | Scale | 1" = 100' |
| Checked by | BCB | Date | 04/07/2017 |
| Drawn by | TMR | Project No. | 160263 |
| Revised by | | Scale in Feet | 0 100 200 300 |
| By | | | |
| Date | | | |

| | | | |
|---------------------|--|--|--|
| Project Name | TOTAL PROJECT AREA PLAN | | |
| Project Description | EROSION AND SEDIMENT CONTROL PLAN | | |
| Location | PLAINS TOWNSHIP LUZERNE COUNTY, PENNSYLVANIA | | |
| Client | DOWNS RACING STABLE & PRACTICE TRACK MOHEGAN SUN POCONO | | |



This Drawing shall not be used for tender or construction unless sealed.
I do hereby certify to the best of my knowledge, information and belief, that the Erosion and Sediment Control and Site Restoration Plan and Post Construction BMPs are true and correct, represent actual field conditions and are in accordance with the 25 Pa. Code Chapters 78 and 102 of the Department's rules and regulations. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Brian Charles Bonner

This drawing, its contents, and each component of this drawing are the property of and proprietary to ARM Group Inc. and shall not be reproduced or used in any manner except for the purpose identified on the Title Block, and only by or on behalf of this client for the identified project unless otherwise authorized by the express, written consent of ARM Group Inc.

NON-FINAL FORM

Version 1.0

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP

July 3, 2018
Month, Day and Year

NON-FINAL FORM

Version 2.0

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP

September 20, 2018
Month, Day and Year

Nutrient Management Plan

For Crop Year(s)

2020

2021

Prepared For

Operator's Name, Mailing Address, Telephone Number(s)

DOWNS RACING LP
doing business as – Mohegan Sun at Pocono Downs
1280 Highway 315
Wilkes-Barre, PA 18702
Office: 570-831-2166, Cell: 570-507-0156

Operation's Location Address (if different than above)

Site Name (CAFOs)

DOWNS RACING LP

Prepared By

Nutrient Management Specialist's Name, Address, Telephone Number(s)

EVIN FITZPATRICK
3050 YELLOW GOOSE ROAD
LANCASTER, PA 17601
717.393.2176

Nutrient Management Specialist's Program Certification Number

NMC#2001

Administratively Complete Date

Plan Approval Date

Plan Update Submission Date(s)

(updates to the approved plan not requiring board action)

PA Bulletin notice
July 21, 2018
Expires August 20, 2018

Extension of review
granted till November
13, 2018 MAW

NON-FINAL FORM

Version 3.0

This NMP may be revised prior to a formal action by the Conservation District Board. The final form of the plan will be available at least 7 days prior to Board action. You may contact the Conservation District to determine the current status of the NMP

October 25, 2018
Month, Day and Year

FINAL FORM

This version of the plan will be considered for action by the Conservation District Board at their November 13, 2018 meeting

October 25, 2018
MONTH, DAY AND YEAR



**COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION**

DATE: October 29, 2018

TO: State Conservation Commission Members

FROM: Frank X. Schneider, Director
Nutrient and Odor Management Programs

THROUGH: Karl G. Brown
Executive Secretary

RE: Nutrient Management Advisory Board

Governor Wolf recently signed into law, as part of Act 162 of 2018, changes to the membership and roles of both the Department of Environmental Protection (DEP) Agricultural Advisory Board (AAB) and the State Conservation Commission (SCC) Nutrient Management Advisory Board (NMAB).

In regards to the NMAB, Act 162 of 2018, specifically:

1. Adds a livestock producer (any species) which will become effective and the end of the commercial agricultural lender terms
2. Deletes the commercial agricultural lender position.
3. The six livestock producers shall be nominated in a manner that provides representation of the northwest, north central, northeast, southwest, south central, and southeast regions of the Commonwealth, corresponding to the Department of Environmental Protections (DEPs) regional offices.
4. Two of the livestock producers shall hold an active Concentrated Animal Feeding Operation (CAFO) permit.
5. Changes from 60 days to 90 days that the commission shall give to the NMAB to comment on the proposed regulations, guidelines or criteria.

Attached you will find:

1. A listing of the membership of the NMAB and their terms, along with the new changes under Act 162 of 2018.
2. Senate Bill 1171 (the bill that became part of Act 162 of 2018)
3. Fiscal note on Senate Bill 1171

THE GENERAL ASSEMBLY OF PENNSYLVANIA

SENATE BILL

No. 1171 Session of
2018

INTRODUCED BY BROOKS, HUTCHINSON, VULAKOVICH, WAGNER AND BROWNE,
MAY 18, 2018

AS AMENDED ON SECOND CONSIDERATION, HOUSE OF REPRESENTATIVES,
OCTOBER 16, 2018

AN ACT

Amending Titles 3 (Agriculture) and 27 (Environmental Resources) of the Pennsylvania Consolidated Statutes, in nutrient management and odor management, further providing for the Nutrient Management Advisory Board; and, in Agricultural Advisory Board, further providing for establishment of board, FOR POWERS OF BOARD AND FOR REVIEW OF REGULATIONS.

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Section 1. Section 510(a) and (d) of Title 3 of the Pennsylvania Consolidated Statutes are amended to read:

§ 510. Nutrient Management Advisory Board.

(a) Creation.--There is created the Nutrient Management Advisory Board. The board shall consist of 16 members appointed by the chairman of the commission and approved by a two-thirds vote of the commission. The members so appointed shall consist of [five] six active commercial farm owners or operators representing the livestock, swine, meat poultry, egg poultry and

dairy industry nominated by Statewide general farm organizations, one veterinary nutrition specialist, one representative from the feed industry, one representative from the fertilizer industry, [one representative of commercial agricultural lenders,] one representative of local government, one representative of academia who shall be an agronomist or plant scientist faculty member of the school of agriculture of a Pennsylvania college or university, one representative of academia who shall be an animal science faculty member with an expertise in odor management from the school of agriculture of a college or university within this Commonwealth, one hydrologist, two citizen representatives who are not farmers and one environmental representative, all of whom shall have sufficient knowledge, experience or familiarity with agronomic practices, nutrient management practices or odor management practices and all of whom shall be residents of this Commonwealth. The six active commercial farm owners or operators shall be nominated in a manner that provides representation of the northwest, north central, northeast, southwest, south central and southeast regions of this Commonwealth, corresponding to the regions served by the Department of Environmental Protection regional offices. Two of the six active commercial farm owners or operators shall hold an active concentrated animal feeding operation permit as required by the act of June 22, 1937 (P.L.1987, No.394), known as The Clean Streams Law.

* * *

(d) Duties.--The board shall review and comment on all commission proposed regulations[, the interim guidelines under section 504(2) (relating to powers and duties of commission) and

the interim criteria under section 504(5)] developed to implement the provisions of this chapter. The commission shall have no power to promulgate regulations[, interim guidelines or interim criteria] under this chapter until receipt of written comments on the proposed regulations[, guidelines or criteria] from the board or until [60] 90 days have expired from the date when the regulations[, guidelines or criteria] were submitted by the commission to the board for its comments. Existing regulations[, guidelines and criteria] shall continue until modified, superseded or repealed by the commission.

* * *

~~Section 2. Section 702(b) of Title 27 is amended by adding a paragraph to read:~~

SECTION 2. SECTIONS 702(B) (2), ~~703 AND 704(A) AND (B)~~ AND 703 OF TITLE 27 ARE AMENDED TO READ:

§ 702. Establishment of board.

* * *

(b) Members.--The following persons shall comprise the board:

* * *

~~(7) Two members appointed by the secretary that hold an active concentrated animal feeding operation permit as required by the act of June 22, 1937 (P.L.1987, No.394), known as The Clean Streams Law.~~

* * *

(2) A DAIRY PRODUCER, A LIVESTOCK PRODUCER, A POULTRY PRODUCER, A GRAIN PRODUCER, A FRUIT PRODUCER, A VEGETABLE PRODUCER, A REPRESENTATIVE OF THE ORNAMENTAL HORTICULTURAL INDUSTRY, A PRODUCER ENGAGED IN SUSTAINABLE AGRICULTURE, A

REPRESENTATIVE FROM THE AGRICULTURAL CHEMICAL MANUFACTURERS INDUSTRY AND A REPRESENTATIVE FROM THE AGRIBUSINESS INDUSTRY. THE GOVERNOR SHALL APPOINT THESE REPRESENTATIVES TO SIT FOR A THREE-YEAR TERM. REPRESENTATIVES APPOINTED UNDER THIS PARAGRAPH MUST RECEIVE A MAJORITY OF THEIR GROSS INCOME FROM THE ACTIVITY WHICH THEY REPRESENT. TWO OF THE REPRESENTATIVES APPOINTED UNDER THIS PARAGRAPH SHALL HOLD AN ACTIVE CONCENTRATED ANIMAL FEEDING OPERATION PERMIT AS REQUIRED BY THE ACT OF JUNE 22, 1937 (P.L.1987, NO.394), KNOWN AS THE CLEAN STREAMS LAW.

* * *

§ 703. POWERS OF BOARD.

(A) GENERAL RULE.--THE BOARD SHALL HAVE THE FOLLOWING POWERS:

(1) PROVIDE ADVICE AND EXPERTISE TO THE [SECRETARY] DEPARTMENT REGARDING THE NATURE OF AGRICULTURE IN THIS COMMONWEALTH.

(2) [ASSIST THE SECRETARY AND PROVIDE WRITTEN COMMENTS ON NEW DEPARTMENTAL POLICY THAT WILL IMPACT UPON AGRICULTURE IN THIS COMMONWEALTH.

(3) ASSIST THE SECRETARY AND PROVIDE COMMENT ON REGULATORY, ~~PERMITTING, TECHNICAL GUIDANCE AND POLICY~~ PROPOSALS PURSUANT TO SECTION 704 (RELATING TO REVIEW OF REGULATIONS).] CONSULT WITH THE DEPARTMENT ON NEW DEPARTMENTAL POLICY AND REVISIONS TO EXISTING DEPARTMENTAL POLICY AND ON PROPOSED TECHNICAL GUIDANCE THAT WILL AFFECT AGRICULTURE IN THIS COMMONWEALTH.

(4) [PROVIDE COMMENT TO THE SECRETARY REGARDING EXISTING DEPARTMENTAL POLICY, ~~PERMITTING, TECHNICAL GUIDANCE~~ AND

REGULATIONS AFFECTING AGRICULTURE IN THIS COMMONWEALTH.]
CONSULT WITH THE DEPARTMENT ON PROPOSED REGULATIONS AND
PROPOSED GENERAL PERMITS THAT REGULATE AGRICULTURE IN THIS
COMMONWEALTH.

(B) EXEMPT REGULATIONS.--REGULATIONS SUBJECT TO REVIEW BY
THE SEASONAL FARM LABOR COMMITTEE UNDER THE ACT OF JUNE 23, 1978
(P.L.537, NO.93), KNOWN AS THE SEASONAL FARM LABOR ACT, ARE
EXEMPT FROM REVIEW UNDER SUBSECTION (A).

SECTION 2.1. SECTION 704(A) AND (B) OF TITLE 27 ARE AMENDED
AND THE SECTION IS AMENDED BY ADDING A SUBSECTION TO READ:

§ 704. REVIEW OF REGULATIONS AND OTHER DOCUMENTS.

(A) NOTICE TO BOARD.--

~~(1)~~ THE DEPARTMENT SHALL NOTIFY OF AND PROVIDE THE BOARD
[OF THE DEVELOPMENT OF] WITH ANY REGULATORY PROPOSAL, ~~PERMIT,~~
TECHNICAL GUIDANCE OR DEPARTMENTAL POLICY OR PROPOSED
GENERAL PERMIT WHICH WOULD REGULATE OR AFFECT AGRICULTURE
[AS EARLY AS POSSIBLE BUT NOT LESS THAN 120 DAYS PRIOR TO ~~;~~

~~(I)~~ THE DATE THE ENVIRONMENTAL QUALITY BOARD MEETS
TO INITIALLY CONSIDER ANY PROPOSED RULEMAKING RESULTING
FROM THE REGULATORY PROPOSAL ~~;~~ ;

~~(II)~~ THE DATE THE DEPARTMENT PUBLISHES NOTICE TO
ESTABLISH OR CHANGE A PERMIT; OR

~~(III)~~ THE DATE THE DEPARTMENT ESTABLISHES A POLICY.

~~(2)~~ NOT LESS THAN 60 DAYS PRIOR TO AN ACTION UNDER
PARAGRAPH (1) (I), (II) OR (III), THE DEPARTMENT SHALL PROVIDE
THE BOARD WITH A WRITTEN VERSION IN SUBSTANTIALLY THE FORM
THAT WILL BE PUBLISHED OR ESTABLISHED OF ANY REGULATORY,
PERMIT, TECHNICAL GUIDANCE OR DEPARTMENTAL POLICY PROPOSAL
THAT WOULD REGULATE OR AFFECT AGRICULTURE.

~~(3) THE DEPARTMENT MAY NOT PUBLISH OR ESTABLISH ANY REGULATORY, PERMIT, TECHNICAL GUIDANCE OR DEPARTMENTAL POLICY PROPOSAL THAT REGULATES OR AFFECTS AGRICULTURE PRIOR TO BOARD REVIEW OF A DOCUMENT PROVIDED UNDER PARAGRAPH (2). ANY DISCUSSION OR DECISION BY THE BOARD RELATED TO THE REVIEW SHALL BE REFLECTED IN THE MINUTES OF THE BOARD.~~

(B) MEETING AND CONSULTATION WITH BOARD.--AT THE REQUEST OF THE BOARD, IF THE REQUEST IS MADE WITHIN 30 DAYS FROM THE DATE OF RECEIPT OF THE NOTICE REQUIRED BY SUBSECTION (A), THE DEPARTMENT SHALL MEET AND CONSULT WITH THE BOARD IN THE FORMULATION OF ANY SUCH REGULATORY, ~~PERMIT, TECHNICAL GUIDANCE OR DEPARTMENTAL POLICY~~ PROPOSAL, AND THEREAFTER THE BOARD MAY PROVIDE THE DEPARTMENT WITH WRITTEN COMMENTS THEREON.] OR ANY PROPOSED TECHNICAL GUIDANCE THAT WOULD AFFECT AGRICULTURE.

(B.1) BOARD REVIEW.--THE DEPARTMENT MAY NOT PUBLISH ANY PROPOSED REGULATION OR PROPOSED GENERAL PERMIT THAT REGULATES AGRICULTURE OR PROPOSED TECHNICAL GUIDANCE THAT AFFECTS AGRICULTURE PRIOR TO:

(1) CONSULTATION WITH THE BOARD IN THE FORMULATION OF THE PROPOSED REGULATION, PROPOSED GENERAL PERMIT OR PROPOSED TECHNICAL GUIDANCE, AS REFLECTED IN THE MINUTES OR BY WRITTEN COMMENTS OF THE BOARD; OR

(2) SIXTY DAYS FROM THE DATE WHEN THE PROPOSED REGULATION, PROPOSED GENERAL PERMIT OR PROPOSED TECHNICAL GUIDANCE WAS PROVIDED UNDER SUBSECTION (A), UNLESS THE BOARD SOONER DECIDES BY MAJORITY VOTE THAT NO CONSULTATION UNDER PARAGRAPH (1) IS REQUIRED.

* * *

Section 3. Members of the Nutrient Management Advisory Board

AND MEMBERS OF THE AGRICULTURAL ADVISORY BOARD, as of the effective date of this section, shall continue to serve as members OF THEIR RESPECTIVE BOARDS until their present terms of office expire.

Section 4. This act shall take effect in 60 days.



COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: November 1, 2018

TO: Members,
State Conservation Commission

THROUGH: Karl G. Brown, Executive Secretary
State Conservation Commission

FROM: Johan E. Berger, Conservation Program Specialist
Financial Administration, Policy, Certification & Conservation District Programs

RE: Request for designation of funds to a Reserve Account -
Elk County Conservation District, Greene County Conservation District,
Lycoming County Conservation District and Susquehanna County Conservation
District.

Action Requested:

Approval of requests from the Elk County, Greene County Lycoming County and Susquehanna County conservation districts for the designation of FY2018-19 allocated Unconventional Gas Well funds to ‘Scholarship Program’ or ‘Building Fund’ reserve accounts as noted in each respective request.

Background:

The State Conservation Commission, through the *Conservation District Fund Allocation Program Statement of Policy*, created the opportunity for a conservation district to designate funds allocated by the Commission to ‘reserve accounts’ for certain administrative and programmatic functions of the district. Examples of designated uses for reserve accounts include: scholarship programs, employee separation costs and building fund/capital improvement projects. Designation of CDFAP funds to ‘reserve accounts’ must be approved by the Commission

The Commission recently received four (4) applications for designation of FY2018-19 CDFAP funds to ‘reserve accounts’ from the Elk County Conservation District (Elk CCD) (Attachment 1), the Greene County Conservation District, (Greene CCD) (Attachment 2), the Lycoming County Conservation District (Lycoming CCD) (Attachment 3) and the Susquehanna County Conservation Districts (Susquehanna CCD) (Attachment 4).

The first application, from the Elk CCD, requests designation of \$6,000 in allocated FY2018-19 UGW funds into a ‘Building Reserve Account’ the district would like to establish for future building lease, renovations or new construction. The Elk CCD Board of Director’s acted to designate these funds at its August 27, 2018 public meeting.

The second application, from the Greene CCD requests the designation of \$5,000 in allocated FY2018-19 UGW funds into a 'Envirothon Education Scholarship' fund created by the district. The 'Greene County Envirothon Continuing Education Scholarship' fund was created with the intent to award each of the 5 members of the winning team, from the county's local Envirothon competition, with a \$500 scholarship award as per the district's scholarship policy. It is the intention of the district to supplement the scholarship fund with other funds contributed to the Scholarship fund and maintain the scholarship fund long term. The Greene CCD Board of Director's acted to designate the FY2018-19 funds at its August 21, 2018 public meeting

The third application, from the Lycoming CCD, requests to designate \$2,500 in allocated FY2018-19 UGW funds into their Envirothon Education Scholarship fund. At its September 12, 2017, public meeting, the State Conservation Commission approved the creation of a 'Scholarship Reserve Account', at the request of the Lycoming CCD, for use of UGW funds allocated to the district. The approved request placed \$2,500 of UGW funds into the new scholarship fund with the intent to award each of the 5 members of the winning team, from the county's local Envirothon competition, with a \$500 scholarship award as per the county's scholarship policy. The Lycoming CCD Board of Director's acted to designate the FY2018-19 funds at its October 17, 2018 public meeting.

The fourth application, from the Susquehanna CCD requests to designate \$89,015.97 in allocated FY2018-19 UGW funds into an existing 'Building Reserve Account'. At its March 17, 2015, public meeting, the State Conservation Commission approved the creation of a Building Reserve Account for Susquehanna CCD. The approved request placed \$108,254 of UGW funds in a reserve account for a new office building project. That building project is currently under construction. Subsequently UGW funds from FY2015-16, FY2016-17 and FY2017-18 allocations in an amount totaling \$234,878 were requested by the Susquehanna CCD for designation to the Building Reserve account and approved by the Commission. The Susquehanna CCD Board of Director's acted to designate the FY2018-19 funds at its August 16, 2018 public meeting.

Recommendation:

Staff recommends approval of the requests from the Elk CCD to designate \$6,000 to a Building Reserve Account for future building construction or renovation; the Greene CCD to designate \$5,000 to a Scholarship Reserve Account to support the district's Envirothon scholarship program; the Lycoming CCD's request to designate \$2,500 to its Scholarship Reserve Account to support the district's Envirothon scholarship program and the Susquehanna CCD to designate \$89,015.97 Building Reserve Account for current building project construction.

Attachments (4)

**Proposed Building Reserve Account
using SCC Allocated UGW Funds**

District Name Elk County Conservation District

Date Board took action on creating this proposed account: August 27, 2018
(Please provide a copy of district board minutes)

Name of Proposed Reserve Account: Building Reserve Account

Purpose/description of account and the overall building project:

Potential future new building construction, future building lease and/or major renovations.

Length of time you expect account to remain active: Permanent (ex. 1 yr, 2 yr, permanent)

Who owns the property: Currently occupy building owned by County of Elk

If the property is not owned by the District, how long of a lease do you have: N/A

Will the District have a mortgage and how long will it be for after the building is complete: N/A

Fiscal management policy relating to the account:

How will you document expenditures in the account: Quickbooks

Will the board take action on each transaction: Yes

Who will have signature authority on the account: Board Chair, Vice-Chair, Manager, 1 other member (ex. Manager, chair)

Expected Size of Account: \$6,000 to start this year

Will this account be replenished and if so how: Yes, with excess funds

Elk Conservation District Meeting Minutes August 27, 2018

The regular meeting of the Elk County Conservation District was held on August 27, 2018. The meeting was called to order by Vice-Chairman Michael Hovatter at 4:30 p.m. with the Pledge of Allegiance to the Flag.

Those in attendance included:

| | |
|-----------------------------|---|
| Vice-Chairman: | Michael Hovatter |
| Directors: | Ray McMinn, Joe Labant, Jerry Olson, and Andy Sorg |
| Commissioner Director: | Matt Quesenberry |
| Associate Director: | Chris Smith |
| District Manager: | Steve Putt |
| Watershed Technician: | Stephanie Stoughton |
| Resource Conservation Tech: | Kelsey Kilhoffer |
| Secretary: | Diane Myers |

Russ Braun, John Green, and Kate Yetzer were excused from the meeting. One member of the press was also present.

The July 23, 2018 meeting minutes were approved with a motion by Jerry Olson, seconded by Andy Sorg. All were in favor.

The Financial Statements for the period ending August 21, 2018 were reviewed with no comments and stand approved as submitted.

District Manager's Report:

District Manager Steve Putt's activities for the previous month have been included in his written report. He added that our intern, Tara Fisher, did a great job this summer.

Watershed Technician Report:

Stephanie Stoughton's activities for the previous month have been included in her written report.

Resource Conservation Technicians:

Kate Yetzer's activities for the previous month have been included in her written report. She was not present for the meeting.

Kelsey Kilhoffer's activities for the previous month have been included in her written report. She added that the Farm Tour was very successful and we received a lot of positive feedback.

Correspondence:

There was no correspondence for the time period.

New Business:

New DGR & LVR Bank Accounts: Because the Center for Dirt & Gravel Roads will soon be requiring separate accounts for DGR & LVR funds, Steve requested approval to set up two new bank accounts at CNB Bank. A motion was made by Ray McMinn, seconded by Andy Sorg, to approve the two new checking accounts.

CD UGWF Allocation Worksheet Approval: A motion was made by Ray McMinn, seconded by Jerry Olson, to approve the 2018-19 CD UGWF Allocation Worksheet. All were in favor.

Building Reserve Account using SCC Allocated UGW Funds: Due to DEP and the State Conservation Commission limiting funding for CD UGW funds, Steve requested submitting a proposal to apply for a building reserve account with remaining funds which would total about \$6,000.00. A motion was made by Joe Labant, seconded by Ray McMinn, to approve the application for a building reserve account. All were in favor.

Set up Bank Account for Building Reserve Account: A motion was made by Joe Labant, seconded by Andy Sorg, to approve a new savings account for the building reserve account should the application be approved. All were in favor.

Old Business:

Dirt & Gravel / Low Volume Road Update: Steve reported that Jones Township has started their Stony Road project. Jay Township will be starting their Spring Run project this week. We are waiting on the completion of the other approved contracts.

Buffalo Turbine Lease Agreement: A copy of the lease agreement was included in the mailing. Matt Quesenberry mentioned that the agreement was forwarded to Solicitor Tom Wagner for review and he found no problems. Mike Hovatter suggested some changes to include 3 consecutive work days, requesting some kind of security deposit, and having a maintenance checklist in place. The board agreed on a \$500.00 security deposit. The agreement will be tabled until the next meeting when the appropriate changes have been made.

West Creek Wetlands Update: Steve reported that the committee met last Tuesday to discuss maintenance issues. The St. Marys Ecology Club is interested in doing another work day so this may assist with some of the maintenance needed.

REPORTS FROM COOPERATING AGENCIES:

No cooperative agencies were present for the meeting.

The meeting was adjourned at 5:20 p.m. with a motion by Jerry Olson, seconded by Ray McMinn. All were in favor.

The next meeting of the Elk County Conservation District will be held on Monday, September 24, 2018 at 4:30 p.m. at the Community Recycling Center Office Building, 850 Washington Street, St. Marys, PA 15857.

**Proposed Reserve Account
using SCC Allocated UGW Funds**

District Name ___Greene County Conservation District_____

Date Board took action on creating this proposed account: ___8/21/2018_____

(Please provide a copy of district board minutes)

Name of Proposed Reserve Account:___Continuing Education Scholarship Fund_____

Purpose/description of account and the overall project:

Collect funds to be utilized for funding a \$500 per student scholarship annually for the winning Greene County Envirothon Team. Funds will be set aside for each student who participates on the county Envirothon winning team which amounts to \$2500 annually. Each student is responsible for collecting their scholarship after their date of graduation. Checks are written out to the school of choice and the student. Students could potentially have a \$2000 scholarship when they graduate if they are on the winning team annually.

Length of time you expect account to remain active: ___permanent_____ (ex. 1 yr, 2 yr, permanent)

Scholarship Accounts

Does your district have an established Scholarship policy? ___yes_____ **if yes, please attach**

Separation Accounts

Do you have a district policy in regard to leave payout when staff retires or leaves district employment? _____

If yes, please attach.

Do you expect staff retirements in the next 5 years? _____ **If so how many?** _____

Other Type of Account: (Please describe)

Fiscal management policy relating to the account:

How will you document expenditures in the account:___permanent_____

Will the board take action on each transaction: ___no_____

Who will have signature authority on the account: _____two conservation district executive board members. _____(ex. Manager, chair)

Expected Size of Account:___15,000_____

Will these funds be in an interest bearing account? ___yes_____

Will this account be replenished and if so how: ___as we obtain funds from local sponsors_____



Greene County Conservation District

22 West High Street – Suite 204 – Waynesburg, PA 15370

Phone 724-852-5278 – Fax 724-852-5341

E-Mail: gccd@co.greene.pa.us -- Website: <http://www.co.greene.pa.us/gccd>

GREENE COUNTY CONSERVATION DISTRICT

REGULAR MEETING

MINUTES

August 21, 2018

CALL TO ORDER AND INTRODUCTION OF GUESTS

Chairman Eisiminger called the meeting to order at 10:05 a.m. at the Greene County Conservation District Conference Room, 22 West High St., Waynesburg, PA. Those in attendance were as follows:

Greene County Conservation District Directors and Associate Directors

Bradley Eisiminger-Chairman; Jim Cowell-Vice Chairman; Archie Trader-Commissioner Representative; Mike Belding-Secretary; Tom Headlee-Treasurer; Jim Jones-Farm Director; Bill Wentzel-Public Director; Gay Thistle-Associate Director; Glodenna Halstead- Associate Director; Jerry Day-Associate Director and Dave Shipman-Associate Director.

Staff

Lisa Snider-District Manager; Lindsay Kozlowski-Assistant Manager/Environmental Program Specialist; Jared Zinn-Watershed Specialist; Michaela Hildreth-Conservation Technician; Ben Schweiger- Conservation Technician and Lauren Weaver-Fiscal Officer

Guests and Cooperating Agencies

Mike Hamilton-NRCS; Phil Evans NRCS

Public Comments- None

APPROVAL OF MINUTES

A motion was made by Tom Headlee to approve the minutes of the July 17th, 2018 meeting. Bill Wentzel seconded. (Motion Passed)

TREASURER'S REPORT

A motion was made by Jim Cowell to accept the treasurer's report. Mike Belding seconded. (Motion Passed)

CORRESPONDENCE AND UPCOMING EVENTS

Invasive Asian Longhorn Tick Confirmed in Pennsylvania

National Veterinary Services Laboratory in Ames, Iowa confirmed the presence of Asian, or longhorn tick, in Pennsylvania. This tick can cause anemia in livestock the tick was discovered on a wild deer in Centre County.

STAFF REPORTS

Lindsay Kozlowski – Ms. Kozlowski added that they have received a new pipeline project, that extend from Franklin Township near the anchor compressor station through Whitley Township and Wayne Township to West Virginia State Line. EQT paid \$77,200.00 in E&S fees and an accelerated fee, \$35,225.00 Chapter 105 Fees, and \$500.00 Chapter 102 Fees. This is one of the largest projects that Ms. Kozlowski has received to date. Ms. Snider added that district employees do a great job and many companies are willing to pay an accelerated fee to get their permits and understand the district could use the help and are appreciative of the help and common sense applied to reviews by Conservation District staff.

Mr. Belding added that Ms. Wrights letter to the board talked about the professionalism and leadership of the Conservation board office. Mr. Wentzel added that it was great that she was carrying this information into the classroom.

Jared Zinn - Mr. Zinn stated that August has been a huge month for his outreach/education events. Also Mr. Zinn added that he did a third rain barrel work shop and he had 34 total participants.

Ben Schweiger- Mr. Schweiger mentioned that he had 29 new applications for the GRACE program, they have visited 23 of those farms and 2 of the applications are potential forestry plans.

Michaela Hildreth- Ms. Hildreth added to her report that she worked the fair to get more GRACE applications and it was a success. She has been working with other staff to learn about the permitting process with the Chapter 102 & 105 permitting.

Lisa Snider – Ms. Snider added that Peyton the West Nile Virus intern that she is trapping high numbers of mosquitos and more positives than normal. Peyton has been working with Zach and Brian from DEP to do barrier controls. Ms. Snider added that she wouldn't be surprised if we would need to do a spraying before the first frost. Peyton's last day is Friday and we will be going back to 3 shipments a week and other staff will take over what she is doing.

OLD BUSINESS

Burwell Cemetery – Bald Hill Church Road

None

NEW BUSINESS

Request for Assistance

This meeting we had five people request for assistance as cooperators, Carl Biddle-Cumberland Township 536.65 acres, Carl Graham-Whitley Township 185.61 acres, Chris Eisiminger-Whiteley Township 199.8 acres, Greg Kime-Dunkard Township 29.32 acres, Charles Ralph Adamson-Wayne Township 381.16 acres.

A motion was made by Jim Cowell approve the 5 people that requested for assistance. Archie Trader seconded. (Motion Passed)

Mobile Environmental Display for 2019 Greene County Fair

Mr. Zinn is requesting to purchase a mobile environmental display for the 2019 Greene County Fair the cost to rent the mobile unit for one week is \$125 plus mileage from and to Armstrong County. The trailer has water demonstrations and was developed in Armstrong County by the Carnegie Science Center and would teach the public about watersheds and water systems. It contains water quiz games, waveform tank, see like a fish activity along with other educational activities. GCCD would advertise the display ahead of time and man it once it has arrived. There is a lot of demand for this trailer that is why we need to request it a year in advance. Mr. Cowell mentioned that we have it arrive the Saturday before the fair starts so it can be delivered.

A motion was made by Mike Belding to move forward or reserving the Mobile Display for the 2019 Greene County Fair. Jim Cowell seconded. (Motion Passed)

GRACE Update

Mr. Schweiger brought forward a proposal that would allow compensation for lime purchased at 100% CCE. Many different supplies have CCE percentages that range from 80% (our minimum) to 110%. If a lime is purchased with CCE that is greater than 100 % then we would not pay them as much because they would not need as much lime and if the lime CCE is at 80% additional lime could be purchased and reimbursed.

A motion was made by Jim Cowell to change the formula for the lime reimbursement. Jim Jones seconded. (Motion Passed)

Support Letter West Greene FFA

Ms. Wright asked for approval to send a pre-drafted letter from the board to the West Greene FFA for local recommendation that the WG FFA program is supported by the Conservation District.

A motion was made by Mike Belding to send the letter to support the WG FFA. Jim Cowell seconded. (Motion Passed)

2018-2019 PUC & UGWF Funding Allocation

Ms. Snider presented a potential budget for the 2018-2019 UGWF funding use and ACT funding request, we will receive \$243,209.00. She budgeted for salaries, office supplies, administration, and special projects for the GRACE project. Ms. Snider had some money left over, she contacted the state and is going to use some of it toward the scholarships, and two winter interns. ACT funding is separate but included in the total from the UGWF funding.

A motion was made by Archie Trader to submit conservation district allocation worksheet as presented and the ACT funding request. Mike Belding seconded. (Motion Passed)

D&G Roads

Ms. Snider asked the board to consider an amendment to three of the current Dirt & Gravel Road projects. Greene Township, Woods Run Road the contract was signed approximately two years ago, the township realized that the project would require hiring a paving company to place the fill material in the road bed. This cost was not initially approved in their original contract and should add \$10,000.00 as an amendment to their contract.

Springhill Township's, Jobe Road project is lacking the permitting fees and engineering fees, Ms. Snider overlooked this needs to be added to the current project. The amendment to their contract will be approximately \$5,000.00.

Jackson Township is finished with a Low Volume road and they did road fill in a streambank stabilization and the top tar and chip was not added in the original contract. Additional expenditures will be approximately \$1,200.

A motion was made by Jim Cowell to approve the amendment to the three contracts. Tom Headlee seconded. (Motion Passed)

Cooperating Agencies

Phil Evans NRCS- Mr. Evans and Ms. Hildreth went out to visit with Mr. Headlee about a ram pump, Mr. Evans said he didn't think there was enough water flow, he mentioned that it could be a potential for a spring development. The local work meeting held at the conservation office went well Mr. Evans said and he was appreciative that we were able to hold the meeting at our office. Mr. Evans questioned about having someone go for training for writing Nutrient Management plans, Ms. Snider said that we had no one at this time. October is the deadline to sign up for Equip.

Mr. Cowell gave thanks to everyone who helped him get everything together he needed to apply for the Leopold Award, he will know something in the month of September.

NEXT REGULAR MEETING

The next regular meeting will be held on September 18th, 2018 at 10:00 a.m.

ADJOURNMENT

With no further business to discuss, a motion was made by Tom Headlee to adjourn the meeting at 11:03 a.m. Mike Belding seconded. (Motion Passed)

Respectfully submitted,

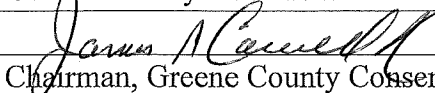


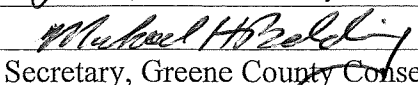
Lauren Weaver
Fiscal Officer

MEETING MINUTES CERTIFICATION

We, the undersigned, agree that the minutes taken above were approved in their entirety by the Greene County Conservation District on Sept 25th, 2018.

Vice


Chairman, Greene County Conservation District


Secretary, Greene County Conservation District



Greene County Conservation District

22 West High St.—Suite 204 – Waynesburg, PA 15370-1839

Phone 724-852-5278 – Fax 724-852-5341

E-Mail: gccd@co.greene.pa.us -- Website: <http://www.co.greene.pa.us/gccd>

**GREENE COUNTY ENVIROTHON
CONTINUING EDUCATION SCHOLARSHIP
GUIDELINES**

To be awarded at the annual Greene County Envirothon competition.

First Place - \$500 Continuing Education Scholarship to each of the five team members.

Scholarships will be issued to the team member upon receipt of documentation of the team member's enrollment to the institution (accredited university, college, post-secondary vocational/technical school, or other institution as approved by the Greene County Conservation District Board of Directors).

Scholarships may be used up to two (2) years after a winning team member has graduated from high school or earned an equivalent certificate. In the interim, the scholarship money will be held by the Greene County Conservation District. In the event a team member chooses not to use the scholarship during the first year of eligibility, written notification must be made to the Greene County Conservation District Board of Directors of the individual's intent to defer the use of the grant to the next year.

Monies will be forfeited at the close of the two (2) year period, unless a written deferral form is submitted and approved by the Greene County Conservation District Board of Directors. Note: This two (2) year period does not begin until the student has graduated from high school or earned an equivalent certificate.

All monies dispersed to the recipient for the scholarship shall be dispersed by draft made payable to the recipient and to the institution of learning in which the recipient is enrolled.

The purpose of the education scholarship is to merit the commitment put forth by students who participated in the Greene County Envirothon competition regardless of their choice of study.

For additional information regarding the Greene County Envirothon or the Greene County Envirothon Continuing Education Scholarship, contact Lisa Snider or Jared Zinn at (724)-852-5278.

**Proposed Reserve Account
using SCC Allocated UGW Funds**

District Name Lycoming County

Date Board took action on creating this proposed account: October 17, 2018
(Please provide a copy of district board minutes)

Name of Proposed Reserve Account: Lycoming Envirothon Education Scholarships

Purpose/description of account and the overall project:

Purpose is to recognize the winning team members from our local Envirothon competition. Each of the 5 winning team members will be eligible to receive a \$500 scholarship according to the guidelines adopted by the Conservation District Board of Directors. Funds for the scholarships will be kept in the Conservation District's "Special Projects" account which is primarily used for Environmental Education efforts. Recipients and disbursements will be tracked separately for reporting purposes.

Length of time you expect account to remain active: permanent (ex. 1 yr, 2 yr, permanent)

Scholarship Accounts

Does your district have an established Scholarship policy? Yes if yes, please attach

Separation Accounts

Do you have a district policy in regard to leave payout when staff retires or leaves district employment? _____
If yes, please attach.

Do you expect staff retirements in the next 5 years? _____ If so how many? _____

Other Type of Account: (Please describe)

Fiscal management policy relating to the account:

How will you document expenditures in the account: According to existing accounting policies

Will the board take action on each transaction: Yes

Who will have signature authority on the account: Continue our current requirement of 2 signatures for any District check/payment (Currently Manager and 3 Directors are eligible to sign checks) (ex. Manager, chair)

Expected Size of Account: \$2,500/year

Will these funds be in an interest bearing account? Yes

Will this account be replenished and if so how: Tree Sales, UGWF, and Donations

MINUTES OF LYCOMING COUNTY CONSERVATION DISTRICT
BOARD MEETING
October 17, 2018

CALL TO ORDER: Chairperson Carl Schlappi called the meeting to order at 7 PM and asked for any public comment on the agenda items.

DIRECTORS PRESENT:

| | |
|---------------------|---------------|
| Carl Schlappi | Chairman |
| Paul Wentzler | Vice Chairman |
| Cameron Koons | Director |
| William Messersmith | Director |
| Joe Radley | Director |

DIRECTORS ABSENT:

| | |
|------------------|-----------------------|
| Bill Kahler | Director |
| Richard Mirabito | Commissioner/Director |

ASSOCIATE DIRECTORS PRESENT:

ASSOCIATE DIRECTORS ABSENT:

| | |
|-----------------|--------------------|
| Larry Fry | Associate Director |
| Paul Kremser | Associate Director |
| Dorothea Lehman | Associate Director |
| Michael Lehman | Associate Director |
| Russ Reitz | Associate Director |
| Chalmer VanHorn | Associate Director |

STAFF PRESENT:

| | |
|-----------------|----------------------------|
| Mark Davidson | District Manager |
| Carey Entz-Rine | Watershed Specialist |
| Tim Heyler | Ag Conservation Technician |
| Kellen Krape | E&S Technician |
| Matthew Long | District Technician |
| Rod Morehart | Chesapeake Bay Technician |
| Denise Moser | Secretary/Treasurer |

COOPERATING AGENCIES PRESENT:

| | |
|-------------|----------------------------------|
| Renee Carey | Northcentral PA Conservancy |
| Tim Davis | NRCS |
| Jaci Harner | DEP – Conservation & Restoration |

COOPERATING AGENCIES ABSENT:

| | |
|---------------|----------------------------------|
| Josh Billings | Planning & Community Development |
| Emmett Kyler | PA Fish and Boat Commission |
| Ken Pochatko | Penn Dot |
| Mike Sherman | Farm Service Agency |
| Jason Smith | Bureau of Forestry |
| Rodney Mee | PA Game Commission |
| Mike Walker | SCC |

INTRODUCTION OF GUESTS: None in attendance.

Action on June 2018 Minutes: The motion was made by Paul Wentzler to approve the September 2018 Board minutes as presented. Seconded by Bill Messersmith. Motion passed unanimously.

TREASURER’S REPORT

ACCOUNT BALANCES 10/5/18

| | |
|--|--------------|
| COUNTY APPROPRIATION (balance remaining) | \$ 1,325.29 |
| SPECIAL PROJECTS CHECKING/SAVINGS | \$ 77,302.50 |
| SPECIAL PROJECTS INVEST | \$ 16,508.98 |
| UGWFA/ACT 13 | \$270,885.53 |
| CLEAN WATER CHECKING/SAVINGS | \$289,900.45 |

| | |
|--|--------------|
| CHESAPEAKE BAY COST SHARE CHECKING/SAVINGS | \$ 93.83 |
| CHESAPEAKE BAY INVEST | \$ 8,777.16 |
| CHESAPEAKE BAY INTEREST CHECKING/SAVINGS | \$ 8,921.42 |
| NUTRIENT MGT/ACT 6 CHECKING/SAVINGS | \$ 4,065.29 |
| WATERSHED SPECIALIST CHECKING/SAVINGS | \$ 2,142.67 |
| GRAVEL ROADS CHECKING/SAVINGS | \$787,643.29 |
| LOW VOLUME ROADS | \$200,813.74 |

Receiving no additional comments on the Treasurer's Report, it will be filed as part of the District audit

CORRESPONDENCE None.

COMMITTEE REPORTS: None.

OLD BUSINESS: None

NEW BUSINESS:

- Garage Invoices from September 24th to October 17th: Centre Concrete - \$5,472.50; Lezzer Lumber - \$479.44. **The motion was made by Joe Radley to approve payment of garage invoices as presented. Seconded by Paul Wentzler. Motion passed unanimously.**
- District Christmas Dinner: Wednesday, December 19th at Silver Thorn Tavern, Hughesville.
- Nutrient Management Plan for Noah & Travis Martin CAFO Cogan House Township: **The motion was made by Joe Radley to approve the Martin's Nutrient Management Plan as presented. Seconded by Bill Messersmith. Motion passed unanimously.**
- 2019 Goals & Objectives: **The motion was made by Bill Messersmith to approve the 2019 Goals & Objectives as presented. Seconded by Joe Radley. Motion passed unanimously.**
- 2018/19 Traditional D&GR Amendment to Moreland Twp Contract – W.A. Rider - \$2,500 (Up Size U Drain size). **The motion was made by Paul Wentzler to approve the amendment as presented. Seconded by Joe Radley. Motion passed unanimously.**
- Third Strike letter for Daniel Kauffman in regards to not having an approved Nutrient Management Plan – refer to note under Tim's section.

STAFF REPORTS

CONSERVATION DISTRICT MANAGER'S REPORT

Mark Davidson

(In addition to his written report)

Mark reviewed his report and answered questions.

Mark presented two items for the Board's review and approval: 1. the Proposed Reserve Account using SCC Allocated UGW Funds and. Scope of Work for Unconventional Gas Well Fund Special Project (Conservation District Fund Allocation Program). Copies of these documents were distributed to the Directors. **The motion was made by Joe Radley to approve the both the Proposed Reserve Account and Scope of Work as presented. Seconded by Paul Wentzler. Motion passed unanimously.**

Tim Heyler recommended the Fry Bros Farm for recognition as 2018 Cooperator of the Year. The Board was in agreement.

Mark and Tim participated with the Farm Day coordinated by Ben Hepburn. This year both the Loyalsock and Montoursville 4th grade students participated. Mr. Hepburn is the driving force behind this program

STAFF REPORTS (continued)

and does an excellent job with activities involving the students. Both Mark and Bill Messersmith complimented Tim on his use of the drone which was a big hit with the students. Great job Tim!

CONSERVATION DISTRICT TECHNICIAN'S REPORT

Matthew Long

(In addition to his written report)

Matt reviewed his report and answered questions.

E&S TECHNICIAN'S REPORT

Kellen Krape

(In addition to his written report)

Kellen reviewed his report and answered questions.

CHESAPEAKE BAY TECHNICIAN'S REPORT

Rod Morehart

(In addition to his written report)

Rod reviewed his report and answered questions.

AG CONSERVATION TECHNICIAN'S REPORT

Tim Heyler

(In addition to his written report)

Tim reviewed his report and answered questions.

Tim asked for the Board for approval to purchase a new computer to obtain the necessary USDA links for processing conservation plans. The previous computer they had stopped working in May and they have been using a loaner from USDA. A new computer, screen, all software for the required programs and a five year warranty will cost up to \$1,500. The computer is essential for processing conservation plans.

The motion was made by Joe Radley to approve the purchase of the computer, programs and accessories as presented up to the cost of \$1,500. Seconded by Bill Messersmith. Motion passed unanimously.

The mentioned notification to Dan Kauffman is on hold at this time due to Tim receiving paperwork stating Mr. Kauffman has an approved Nutrient Management Plan. Currently this is under review and not confirmed as approved. After a discussion, it was felt the "Third Strike" letter should be approved and ready to mail to Mr. Kauffman if the current documentation is found not to meet regulations of the nutrient management plan by the deadline of November 5, 2018. Tim will review the Board's decision with Mike Walker of SCC to ensure proper processing of this issue and is in accordance with the policy.

The motion was made by Cameron Koons to approve sending the "third strike" letter only if Mr. Kauffman has not met the Nutrient Management Plan requirements by stated deadline. Seconded by Paul Wentzler. Motion passed unanimously.

WATERSHED SPECIALIST'S REPORT

Carey Entz

(In addition to her written report)

Carey reviewed her report and answered questions.

The Mosquito monitoring program through DEP ended at the end of September. Unfortunately, Rita Groy will not be back next summer to assist with the program, so we are looking for a candidate to fill this commitment.

Carey mentioned she will be participating in a deer tick research study for DEP this October 2018. After instruction on how to collect the ticks, she is to collect 50 ticks within a stated timeframe and provide them to DEP for this research study.

OTHER REPORTS

NRCS

Tim Davis

This report highlights NRCS assistance to cooperators and communities in Lycoming County for September -October 2018. If you have questions or would like more specific information concerning the report please contact me at 570-433-5101 ext 3.

Technical Assistance

- Several site visits conducted with landowners interested in NRCS Assistance
- One CRP- Grasslands contract completed
- NRCS is currently completing site inspections for **existing** CREP contracts set to expire in 2020
- CREP assistance is currently on-hold as FSA is not allowed to process any **new** CREP applications at this time, effective Oct. 1, 2018

Conservation Plans

- For FY2018 NRCS Lycoming will continue to work with landowners on completing Conservation Plans
- Conservation planning initiated on farm in Moreland Township

Conservation Programs

- Applications for EQIP-FY19 Round 1 are due **Friday, Oct. 19th**.
- NRCS has authorized EWP, and landowners had until **Monday, Oct. 15th** to submit applications
 - 30 calls/contacts were received for EWP evaluation/assistance
 - Damage Survey Report (DSR) site visits conducted Oct. 9th & 12th resulting in 7 eligible sites
 - Design work and background paperwork for EWP sites has been initiated

Additional News

- Food Security Act compliance site inspections have been completed by NRCS Mill Hall staff within Lycoming County resulting in 2 variances being initiated
- October is Disability Awareness Month
- October 30, 2018 for our Annual Cover Crop and Soil Health Workshop and Tour, with registration starting at 9:30am @ The Big Flats Municipal Campus (476 Maple Street Big Flats, NY 14814).
- The second Northeast Cover Crops Council Conference will be held at the Ramada Inn, State College, PA, on Nov. 15 with a field day on Nov. 16, 2018.

Respectfully Submitted,

Ryan D. Koch

Ryan D. Koch
District Conservationist

Farm Bill Program Key

ACEP=Agricultural Conservation Easement Program
AMA= Agricultural Management Assistance
CREP= Conservation Reserve Enhancement Program
CSP=Conservation Stewardship Program
EQIP= Environmental Quality Incentive Program
EWP=Emergency Watershed Protection
RCPP=Regional Conservation Partnership Program
WRE=Wetlands Reserve Easement

NORTHCENTRAL PENNSYLVANIA CONSERVANCY

Renee Carey

Renee mentioned stream construction projects have wrapped up for this year. Two of the projects are rescheduled to next year due to the amount of rain/flooding this year.

NPC has funding from a court settlement to improve the water quality of Lycoming County. Based on projects Carey Entz had provided a project to lower the earthen berm at the former Game Farm in Proctor, along Plunketts Creek. This would help reduce the erosion along the Creek, re-connect the Creek with its floodplain to improve ecological function, and help reduce flooding for the downstream residents. Renee' Carey reported U.S. Fish and Wildlife Service will be surveying at the former Game Farm at Proctor soon

OTHER REPORTS (continued)

DEP – CONSERVATION, RESTORATION and INSPECTION

Jaci Harner

Jaci reviewed her report and answered questions.

MUNCY CREEK WATERSHED ASSOCIATION

(not present)

Chalmer VanHorn

FARM SERVICE AGENCY

(not present)

Michael Sherman

PENN DOT

(not present)

Ken Pochatko

PLANNING & ZONING

(not present)

Josh Billings

ADJOURNMENT: Adjournment was at 8:45 PM by Chairperson Carl Schlappi.

Respectfully submitted,

Denise Moser,
Administrative Specialist

SUSQUEHANNA CONSERVATION DISTRICT

Board Meeting

DATE: Thursday August 16, 2018 Place: 88 Chenango St.

START TIME: 8:30 A.M.

Approved

Dirt & Gravel

| Township | In kind | Applied for | Offered |
|--------------|---------------|---------------|----------------------|
| Dimock | \$ 23,000.00 | \$ 213,980.00 | \$ 200,000.00 |
| Apolocon | \$ 24,000.00 | \$ 115,826.00 | \$ 60,000.00 |
| Liberty | \$ 24,000.00 | \$ 160,000.00 | \$ 130,000.00 |
| Springville | \$ 12,000.00 | \$ 21,460.00 | \$ 21,460.00 |
| Uniondale | \$ 7,200.00 | \$ 72,800.00 | \$ 72,800.00 |
| Forest Lake | \$ 134,272.00 | \$ 116,339.00 | \$ 100,000.00 |
| Choconut | \$ 8,700.00 | \$ 78,438.00 | \$ 70,000.00 |
| Auburn | \$ 2,600.00 | \$ 120,821.00 | \$ 60,000.00 |
| Gibson | \$ 31,000.00 | \$ 131,500.00 | \$ - |
| Brooklyn | \$ 21,000.00 | \$ 175,000.00 | \$ - |
| Franklin | \$ 8,700.00 | \$ 67,450.00 | \$ - |
| Gibson | \$ 31,000.00 | \$ 131,500.00 | \$ - |
| Total | | | \$ 714,260.00 |

LVR
Forest
Lake \$ 12,750.00 \$ 17,956.00 \$ 17,956.00

- **UGWF money allocation**
- Brian motions to allocate the following UGWF funds \$16,350 for special projects and \$89,015.97 for the building fund Jim Kessler seconds - motion passed
- **Harford fair work shift sign-up**
- Passed around sign-up sheet
- **Need to open LVR account**
- Bill Bayne motions to open a LVR bank account Andrew seconds - motion passed
- **Review well driller bids**
- Karp Bid: \$9,243 included grout in bid
- Bell Bid: \$9,163 plus \$10 per foot for grouting
- Brian motions to select Karp's well drill bid of \$9,243 Jim Kessler seconds - motion passed



COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: November 1, 2018
TO: Members
State Conservation Commission
FROM: Johan E. Berger
Financial Administration, Certification & Conservation District Programs
RE: Spotted Lantern Fly Control Program

Background

On September 22, 2014, the Pennsylvania Department of Agriculture (Department), in cooperation with the Pennsylvania Game Commission, confirmed the presence of the Spotted Lanternfly in Berks County, Pennsylvania, the first detection of this non-native species in the United States.

Upon determination that the potential impact to Pennsylvania's agricultural economy and natural resources was great, the Department issued a quarantine with the intent to restrict the movement of the Spotted Lanternfly on November 1, 2014. Counties in eastern Pennsylvania are under limited movement quarantine as the Department and its federal, state, local and non-governmental cooperators develop a strategy to eliminate this pest from the Commonwealth. The quarantine zone includes Berks, Bucks, Carbon, Chester, Delaware, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Philadelphia, Schuylkill counties.

Current Activities

The Department's Bureau of Plant Industry (PDA-BPI), has received a federal grant of \$500,000 to support detection and control efforts of the Spotted Lanternfly (SLF) in the quarantine zone. PDA-BPI, in cooperation with the State Conservation Commission extended an invitation to conservation districts in the quarantine zone to submit a proposal for funding to support conservation district's SLF education and outreach efforts; and detection and control activities they may facilitate and perform in their county.

Eight (8) conservation district: Berks, Bucks, Lancaster, Lehigh, Monroe, Montgomery, Northampton and Schuylkill submitted proposals totaling over \$467,000 for funding to support costs associated with conducting education/outreach events and SLF detection and control activities. Proposal activities range from: public workshops and one-on-one education and outreach events training the public on the identification, transport prevention and proper control methods of SLF to identification and prioritization of infested sites for treatment; coordination of SLF control and host species (*Ailanthus altissima*) management activities.

Conservation districts will be working with individual landowners, businesses and municipalities to assist in identifying and prioritizing treatment of infestation sites and advising on control methods, in coordination with PDA and USDA. Examples of prioritized areas may include: heavily infested private or agricultural tracts; public access areas (parks and recreational areas) and transportation sites or routes in the quarantine zone.

Conservation districts have been advised to coordinate education and outreach activities with partner agencies and organizations such as Penn State Cooperative Extension, local recreation and environmental groups and agricultural organizations. District have also been advised to coordinate identification of infestation and control activities with field staff from PDA and USDA to prevent cross-over of control and treatment activities and maximize the use of resources in the quarantine zone.

Funding for the Spotted Lanternfly Control Program project is available up to June 30, 2019.

November 6, 2018

To: Members
State Conservation Commission

From: Karl G. Brown
Executive Secretary

RE: Dirt and Gravel Road Program Update

Additional information pertaining to this agenda item will be provided at our November 13, 2018 Commission Meeting.

November 6, 2018

To: Members
State Conservation Commission

From: Karl G. Brown
Executive Secretary

RE: Chesapeake Bay Program Update

Additional information pertaining to this agenda item will be provided at our November 13, 2018 Commission Meeting.



**COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION**

DATE: October 25, 2018

TO: State Conservation Commission Members

FROM: Frank X. Schneider, Director
Nutrient and Odor Management Programs

THROUGH: Karl G. Brown
Executive Secretary

RE: Nutrient and Odor Management Programs Report

The Nutrient and Odor Management Program Staff of the State Conservation Commission offer the following report of measurable results for the time-period of September / October 2018.

For the months of September and October 2018, staff and delegated conservation districts have:

1. Odor Management Plans:
 - a. 9 OMPs in the review process
 - b. 6 OMPs approved
 - c. 0 OMP approvals rescinded
2. Managing thirteen (13) enforcement or compliance actions, currently in various stages of the compliance or enforcement process.
3. Worked with legal counsel on one (1) separate Environmental Hearing Board (EHB) cases.
4. Worked with DEP and conservation districts on NM reporting in Practice Keeper.
5. Continue to daily answer questions for NMP and OMP writers, NMP reviewers, delegated Conservation Districts, and others.
6. Assisted DEP with various functions and as workgroup members in Federal and State settings for the Chesapeake Bay Program.
7. Facilitated discussions with the NMAB subcommittee and other parties on the proposed changes for P management in NBS that is open for public comment

8. Continue to receive and work thru opened public comments periods for the following Guidance Documents:
 - a. Nutrient Management Technical Manual
 - b. Nutrient Management and Manure Management Administrative Manual
 - c. Odor Management Program Guidance and Technical Manual
 - d. Odor Management BMP Guide



**COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION**

DATE: October 24, 2018

TO: Members
State Conservation Commission

FROM: Karl J. Dymond
State Conservation Commission *KJ Dymond*

SUBJECT: November 2018 Status Report on Facility Odor Management Plan Reviews

Detailed Report of Recent Odor Management Plan Actions

In accordance with Commission policy, attached is the Odor Management Plans (OMPs) actions report for your review. No formal action is needed on this report unless the Commission would choose to revise any of the plan actions shown on this list at this time. This recent plan actions report details the OMPs that have been acted on by the Commission and the Commission's Executive Secretary since the last program status report provided to the Commission at the September 2018 Commission meeting.

Program Statistics

Below are the overall program statistics relating to the Commission's Odor Management Program, representing the activities of the program from its inception in March of 2009, to October 24, 2018.

The table below summarizes approved plans grouped by the Nutrient Management Program Coordinator Areas and by calendar year.

| | Central | NE/NC | SE/SC | West | Totals |
|--------------------|---------|-------|-------|------|--------|
| 2009 | 7 | 6 | 28 | 1 | 42 |
| 2010 | 5 | 7 | 25 | 2 | 39 |
| 2011 | 10 | 11 | 15 | 2 | 38 |
| 2012 | 9 | 16 | 16 | 2 | 43 |
| 2013 | 10 | 11 | 38 | 3 | 62 |
| 2014 | 13 | 16 | 44 | 2 | 75 |
| 2015 | 16 | 15 | 61 | 2 | 94 |
| 2016 | 19 | 16 | 59 | 4 | 98 |
| 2017 | 25 | 24 | 44 | 3 | 96 |
| 2018 | 11 | 6 | 38 | 1 | 56 |
| Total | 125 | 128 | 368 | 22 | |
| Grand Total | | | | | 643 |

As of October 24, 2018, there are six hundred forty-three **approved** plans and/or amendments, eight plans have been **denied**, seventeen plans have been **withdrawn** without action taken, fifty-three plans were **rescinded**, and nine plans and/or amendments are going through the **plan review process**.

OMP Status Report

| Action | OMP Name | County | Municipality | Species | AEUs | OSI Score | Status | Ammended |
|------------|--|----------------|-----------------|----------|---------|-----------|----------|----------|
| 8/24/2018 | Zimmerman, Alvin | Lancaster | E Earl Twp | Cattle | 0.00 | 18.0 | Approved | |
| 8/29/2018 | Kauffman, Jacob | Lancaster | Drumore Twp | Cattle | 0.00 | 17.6 | Approved | |
| 8/29/2018 | Saylor, Jason - Witmer Farms | Perry | Liverpool Twp | Pullets | 47.64 | 13.7 | Approved | A |
| 9/6/2018 | Smucker, Aaron | Northumberland | Rockefeller Twp | Broilers | 127.84 | 44.2 | Approved | |
| 9/10/2018 | JM Hatchery LLC | Lancaster | Earl Twp | Pullets | 22.04 | 43.8 | Approved | B |
| 9/18/2018 | Light, Jacob - Edris Farm | Lebanon | Bethel Twp | Broilers | 246.85 | 34.4 | Approved | |
| 10/10/2018 | Foster, Tyler C | Schuylkill | W Penn Twp | Broilers | 192.60 | 36.3 | Approved | |
| 10/12/2018 | Kreider, Noah W & Sons, LLP - Manheim Farm | Lancaster | Penn Twp | Layers | 7878.85 | 41.1 | Approved | D |
| 10/15/2018 | Kreider, Noah W & Sons, LLP - Risser Farm | Lancaster | Penn Twp | Pullets | 315.70 | 45.9 | Approved | B |

As of October 24, 2018



COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: November 1, 2018
TO: State Conservation Commission
FROM: Johan E. Berger
 Financial, Certification and Conservation District Programs
SUBJ: 2018 “To-date” Program Accomplishments: Nutrient and Odor Management Specialist; Commercial Manure Hauler & Broker Certification programs

Certification Program Summary

State Conservation Commission staff facilitate training and certification programs for persons interested in ‘commercial’ or ‘public’ certification in order to develop or review odor management or nutrient management plans under the Act 38 *Facility Odor Management or Nutrient Management* programs. Training is also facilitated for commercial manure haulers and brokers seeking certification under the Act 49 *Commercial Manure Hauler and Broker Certification* program.

Program Accomplishments (January 1, 2018 to September 30, 2018)

1. The summer/Fall cycle for the Nutrient Management Specialist certification program began in August 2018. Twelve (12) individuals began coursework towards certification (total for 2018 = 29). The spring certification cycle for the Commercial Manure Hauler and Broker certification program also began in September 2018. Fifteen (15) haulers/brokers completed their coursework and are now certified (total for 2018 = 44).
2. Completed twenty-five (25) reviews of nutrient management plan reviews for certification requirements. *Note: This is an internal review conducted on NMPs under review by public review specialists seeking final certification.*
3. Issued the following licenses to individuals who successfully completed certification and/or continuing education requirements for license renewals:
 - a. Nutrient Management and Odor Management Specialists: 50
 - b. Commercial Manure Haulers and Brokers:..... 330

Total licenses monitored and maintained by Commission staff on behalf of PDA:

 - a. Nutrient Management Specialists..... 303
 - b. Commercial Manure Haulers and Brokers 825
 - c. Odor Management Specialists34
4. Approved credits for eligible continuing education programs planned to November 30, 2018:
 - a. Nutrient Management Specialist certification: 51 events
 - b. Commercial Manure Hauler and Broker certification: 24 events
5. Program staff performed twenty-eight (28) site inspections regarding record keeping requirements under the Commercial Manure Hauler and Broker Certification Program.



**COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION**

DATE: November 1, 2018
TO: State Conservation Commission
FROM: Johan E. Berger
 Financial, Certification and Conservation District Programs
SUBJ: 2018 Program Accomplishments
 Resource Protection and Enhancement Program (REAP)

REAP Program Summary

The Resource Enhancement and Protection (REAP) Program allows farmers, businesses, and landowners to earn state tax credits in exchange for the implementation of conservation Best Management Practices (BMPs) on Pennsylvania farms. REAP is a “first-come, first-served” program – no rankings. The program is administered by the State Conservation Commission and the tax credits are awarded by the Pennsylvania Department of Revenue. Eligible applicants receive between 50% and 75% of project costs in the form of State tax credits for up to \$150,000 per agricultural operation.

Program Accomplishments

The FY2018 REAP application period opened on August 1, 2018. Below is a summary of the FY2017 round of REAP applications and a summary of the FY2018 round, to date (1.) and, a summary of REAP activities from January 1, 2018 to September 30, 2018 (2). Approximately twelve (12) applications received in program year 2017, representing approximately \$1.1 million, could not be considered under the FY2017 allocation. These applications will be held for consideration in the FY2018-19 round of applications for REAP.

(1.) FY 2017 & FY 2018

| Applications | | Total Cost | Other Public Funds | REAP Requests | Credits Granted |
|---------------------|-----|-------------------|---------------------------|----------------------|------------------------|
| 2017 | 319 | \$26.2 million | \$4.9 million | \$11.6 million | \$3.7 million |
| 2018 | 113 | \$4.22 million | \$872,300 | \$1.16 million | TBD |

| a) <u>REAP Request – project types</u> | <u>FY2017</u> | <u>FY2018</u> |
|---|----------------------|----------------------|
| 1) Proposed..... | \$3.00 million | \$446,000 |
| 2) Completed Projects | \$7.70 million | \$714,000 |
| b) No-Till Equipment..... | \$3.80 million | \$521,000 |
| c) Structural BMPs | \$6.2 million | \$600,000 |
| d) Plans (Ag E&S, Conservation, Manure Management, Nutr. Mgmt.) | \$178,500 | \$20,000 |
| e) Low Disturbance Residue Management Equipment | \$283,000 | \$0 |
| f) Precision Ag Equipment | \$140,000 | \$57,000 |

(2.) January 01, 2018 – September 30, 2018

1. Tax Credits issued to applicants for completed projects \$7.05 million
2. Number of BMPs completed associated with issued tax credits..... 312
3. Number of new tax credit ‘sales’ completed..... 149 sale transactions
4. Value of new tax credits processed through ‘sales’.....\$2.99 million
5. Number of site inspections conducted on completed projects27
6. Educational and promotional activities included one press release:
 - 8 speaking events
 - 4 mass email
 - 3 Press release



COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

Written Report

Date: October 29, 2018

RE: Dirt, Gravel, and Low Volume Roads Program (DGLVRP) Update

QAQC Visits – Since Jan 1 2018 staff has completed 19 Quality Assurance/Quality Control (QAQC) visits this year. 4 additional QAQC visits are scheduled. Staff is on schedule to meet the goal of visiting every county in a three-year cycle.

Annual Workshop – Annual Maintenance Workshop was held in Indiana, PA on September 18-20. The event drew attendance from 49 of the states 65 DGLVR participating Conservation Districts, and included concurrent classroom sessions, a GIS training, an administrative training, and visits to a variety of field sites including the in-progress installation of a 18' aluminum arch pipe.

Environmentally Sensitive Maintenance training (ESM)

| | | |
|----------|------------------|--------------|
| 3/28-29 | Butler/Allegheny | 94 attendees |
| 4/3-4: | Centre | 56 attendees |
| 4/10-11: | Venango | 88 attendees |
| 4/17-18: | Lancaster | 47 attendees |
| 5/1-2: | Luzerne | 56 attendees |
| 5/9-10: | Cumberland | 59 attendees |
| 5/22-23: | Somerset | 48 attendees |
| 6/6-7: | Potter | 39 attendees |
| 6/13-14: | Blair | 22 attendees |
| 8/1-2: | Montgomery | 15 attendees |

| | | |
|-----------|----------------|----------------|
| 8/21-22: | Wayne | 25 attendees |
| 10/2-3: | Bedford/Fulton | 55 attendees |
| 10/17-18: | Lycoming | 48 attendees |
| 11/7-8: | Clearfield | 111 registered |

Other DGLVR activities since Jan 1, 2017

Boot Camps: Two “Environmentally Sensitive Road Maintenance Boot Camps” were held in State College in July 2018. These three-day training were directed at new hires from Conservation Districts. Most of the training was held in the field and featured a comprehensive road diagnostic, active cross pipe installation, basic surveying, active DSA placement, and discussion of several stream crossing replacements.

Stream Crossing Trainings: Four “Stream Crossing Replacement Trainings” were held around the State in summer 2018. These one-day trainings included approximately two hours of classroom instruction followed by field exercises involving the surveying and discussion of several completed and potential stream crossing replacements.

Webinars: A total of 15 webinars for conservation districts have been held to date in 2018. Nine of those webinars related to the GIS and quarterly reporting changes, while the remaining 6 were on other program-specific topics.

Project Sharing Sessions: Four Project Sharing Sessions were held to allow conservation districts to share successful projects with other districts as well as Center and SCC staff. The projects presented here were shared with a webinar for other conservation districts, were used in the Program’s 2017 Annual Report, and will help the Center to update the ESM training this winter.

Assessment: Three field trainings were held this fall for conservation districts on how to assess unpaved roads and identify areas where they are impacting streams.

Technical Assistance: Approximately 160 visits

Quarry Visits: Approximately 90 visits

Migration to On-Line quarterly reporting system: An on-line reporting system was developed. Conservation districts participating in the program are now required to submit a quarterly report. This will help both Commission staff as well as District staff keep better track program spending and program activities.



BUILDING BRIDGES

Farmers Municipalities* Citizens
Conservation Districts* Agribusiness*

To: Members October 31, 2018
State Conservation Commission
From: Beth Futrick
Agriculture/Public Liaison
Through: Karl G. Brown, Executive Secretary
State Conservation Commission
Re: Ombudsman Program Update – Southern Alleghenies Region

Activities: September-October 2018

- Organized a pasturewalk held in Huntingdon County on September 22 (Shade Gap, PA).
 - Secured funding through relevant sponsors
 - Developed promotional outreach
 - Assisted with coordinating speakers and agenda/topics
 - Applied for GLC funding to support this event
- Organized the 2018 Farm2Fork dinner in partnership with Huntingdon County Conservation District
 - Secured funding through local sponsors
 - Developed promotional outreach
 - Met with local food caterer and wineries
- Meeting with CDE,/CBE, PSU – planning 2018-2019 PAOneStop training
 - Currently working with 13 conservation districts to assist with coordinating and hosting this year's ag e/s workshops.
 - Assisting with promotional outreach
- Developing a local food system team to host a regional food system training in December
 - Developing an outreach plan to secure other local food practitioners
 - Seeking funding (grants/sponsors)
- Preparing to install a multi-functional riparian buffer at Natureworks Park (BCCD property)

Meetings/Trainings/Events

- Farm2Fork Dinner – Huntingdon County – September 8
- Blair County Penn State Committee meeting – September 17
- Dennie Cramer pasturewalk in Huntingdon County – September 22
- Site visit @ Natureworks Park preparing for invasive control at the multifunctional riparian buffer - October 4
- Indiana County – Local Food Local Places meeting – October 9-10
- Meeting with Altoona Curve Baseball manager to plan a new farmers market at The Curve – October 12
- Presentation to a PSU-Altoona class “Food History” – What local food is available in Altoona, PA - October 18
- Presentation to Blair County Garden Club – Rain Gardens, Green Space, and Urban Ag – October 22
- Greater Pittsburgh Local Food meeting - October 25
- Southern Alleghenies RC&D meeting - October 26
- Meeting with Blair County Community Action to plan for their new community gardens in Altoona - October 30

Conflict Issues/Municipal Assistance –

- Clinton and Lycoming Counties: assisting Dr. Machtinger with fly data from poultry operations.
- Northumberland County – fly complaint

Reports & Grant Applications

--BCCD Board Report

--Final Report for GLC grant- Shade Gap pasturewalk. Seventy producers attended to learn about extending the grazing season



BUILDING BRIDGES

Farmers * Municipalities * Citizens
Conservation Districts * Agribusiness

To: Members
State Conservation Commission

From: Shelly Dehoff
Agriculture/Public Liaison

Through: Karl G. Brown, Executive Secretary
State Conservation Commission

Re: Agricultural Ombudsman Program Update

November 13, 2018

Activities: Since mid-September 2018, I have taken part or assisted in a number of events, including the following:

- Coordinated details for 9 events during Lancaster County Ag Week in October 2018
 - included coordinating all details for Denim & Pearls dinner event
 - attended most of the 9 events during Ag Week
- participating with York Co. Stormwater Authority Implementation Plan “Outreach/Communications” workgroup; including attending the second Public Outreach meeting, and planning the 3rd Public Outreach meeting
- continuing role as Cover Crop Champions Coordinator through National Wildlife Federation; short term grant
 - coordinating details between 2 champion groups and NWF staff in Michigan; doing publicity and promotion of the 2 champion groups podcasts and events; writing articles after interviewing farmers
- working with Center for Dairy Excellence and PSU to provide more Ag E&S Plan Writing workshops in PA
- participated in monthly Mushroom Farmers of PA meetings
- met with Beth Futrick to discuss goals, programs and events for this fiscal year
- attended Soil Health field day
- Serve as Chair of the South Central Task Force Agriculture Subcommittee
- Attended and assisted at Lancaster Co. Agriculture Council meetings

Local Government Interaction: I have been asked to provide educational input regarding agriculture:

Chester Co—on-going attendance at meetings related to Mushroom Phorid Flies with Mushroom Farmers of PA

Moderation or Liaison Activities: I have been asked to provide moderation or liaison assistance with a particular situation:

None currently

Research and Education Activities:

None currently

Fly Complaint Response Coordination: I have taken complaints or am coordinating fly-related issues in:

Perry County—outbreak covering many square miles and 40+ complaints

Perry County—separate but possibly related fly complaint from earlier one in Perry Co

Lebanon County—new fly complaint