



pennsylvania
DEPARTMENT OF AGRICULTURE

**Pennsylvania Department of Agriculture
Bureau of Plant Industry
2021 Fiscal Year Seed Report
Pennsylvania Seed Act**

March 2023

Overview

The Pennsylvania Department of Agriculture Bureau of Plant Industry Seed Division performs analyses on seed samples drawn under the authority of the Pennsylvania Seed Act (amended 2005). The act provides consumers with truthful and accurate information to help make seed purchasing decisions.

The division is responsible for (1) administration and enforcement of the Pennsylvania Seed Act; (2) administration of the Seed Certification Act; (3) operation of the State Seed Laboratory; and (4) maintenance of the seed herbarium.

This report is a summary of official seed inspection and laboratory analyses performed by the seed division from **July 1, 2021 to June 30, 2022**.

Regulatory Requirements

The Seed act, from which the division derives its authority, requires proper labeling for all seeds distributed in Pennsylvania. Information must appear on a tag or label attached in a conspicuous place on the exterior of the seed container. Seed not properly labeled are subject to a "Stop Sale" order, which prohibits their sale/distribution until relabeled to be in compliance with the law. Additionally, the person whose name appears on the seed analysis label must obtain an annual seed license at a cost of \$25.

During the fiscal year of 2021 there were **526** licensed Seed Dealers. The Department collected a total of **\$13,150.00** for Seed Dealers license fees.

The Pennsylvania Code Chapter 111 lists additional requirements for labeling seeds, including:

- Labeling of flower seed mixtures
- Labeling of lawn seed mixtures
- Labeling of treated seeds
- Labeling of seeds for sprouting
- Germination standards for vegetable and flower seeds
- List of prohibited noxious weed seeds
- List of restricted noxious weed seeds including undesirable grass seed in lawn and turf seeds

Seed Certification

Seed certification helps maintain, and make available to the public, sources of high quality seeds and propagating materials of superior varieties grown and distributed to ensure genetic identity. Only after passing rigid field and seed standards can seed be labeled as a class of certified seed. For a summary of crop, variety and acres inspected see Table V.

During the fiscal year the Department collected, **\$9,346.77** in fees for field inspection, tags, labels and other services.

The Pennsylvania Department of Agriculture is an active member of the Association of Official Seed Certifying Agencies.

Seed Laboratory

The Seed Laboratory provides technical information and performs a range of tests and analyses on seed samples from various sources. All seed samples are prepared and tested according to the "AOSA Rules for Testing Seeds" as approved and published by the Association of Official Seed Analysts (AOSA).

During the reporting period, the laboratory received **4,559** samples that required **6,612** separate tests (See Table I). Plant Industry Inspectors submitted **1,542** regulatory seed samples for enforcement of the Seed Act, and **3** regulatory samples to test for viable weed seed to aid in the enforcement of the PA Feed Act. In addition, Plant Industry Inspectors issued **50** Seed Stop Sale Notices for labeling violations directly at retail and wholesale locations representing **1892** containers.

Farmers, wholesale seedsmen and retail outlets submitted **2,689** service samples for labeling purposes and guidance in planting. The seed certification program and various other state agencies submitted **321** samples to determine if the seed met their standards or specifications. The Department collected a total of **\$82,690.80** in fees for these services

The Pennsylvania Seed Act provides the Department the authority to fix, adjust, assess and collect fees for the certification inspection services and requested seed tests. The fees shall be enough to meet reasonable expenses incurred by the Department in making such inspections for certification and conducting seed tests. The current fee structure for seed service samples and certification services are available on the Department website at www.agriculture.pa.gov. The Secretary may adjust the fees by sending notice to licensees and publishing a notice in the Pennsylvania Bulletin. The fees, derived from these services and seed dealer licensing fees, help support the Seed Program.

The Seed Analysts also identifies and tests seeds for the Pennsylvania Department of Transportation, other various State agencies, the State Police Crime Laboratory and the public.

The Seed Laboratory is an active member of Association of Official Seed Analysts (AOSA) and cooperates in work of various committees. Staff members attend the annual meeting of AOSA to vote on rule changes, discuss other items of business and attend committee meetings. Currently, Seed Program Supervisor Johnny Zook is the Vice President of the AOSA and represents the Association at affiliate meetings. Seed Laboratory Supervisor Nishit Patel is the current AOSA CO-chair of the joint Purity Subcommittee. Staff members also participated in online seed training; notably the USDA and AOSA webinars.

The department is also an active member of the Association of American Seed Control Officials (AASCO). Seed Program Supervisor Johnny Zook attends the annual meeting and represents the Association at affiliate meetings.

Each year the Seed Analysts assist the small grain judge at the Pennsylvania Farm Show by examining each individual exhibit for noxious and common weed seeds, other crop seeds and foreign material.

Table I

Classification of samples by kind and numbers of tests involved.

Number of Samples	Kinds	Purity	Noxious Weed Examinations	Germinations*
1,743	Vegetable	51	0	1,716
2,026	Agricultural	620	722	1,804
336	Flower	0	0	328
0	Tree	0	0	0
3	Feed	1	3	1
1	Sprouting Seed	0	0	2
70	Pasture Mix or Blend	15	21	53
4	Flower Mix or Blend	0	0	2
25	Vegetable Mix or Blend	0	0	19
51	Conservation Mix or Blend	3	5	8
1	Vegetable Kit	0	0	0
224	CSLT Grass Mix or Blend	113	148	129
0	Unidentified	0	0	0
0	Native Warm Season Mix or Blend	0	0	0
75	CSLT Grass Single Kind	32	66	37
4,559	Totals	835	965	4,099

Other Tests	
Interstate Noxious Weed Test	138
Treated Germination Test	0
Cold Test	108
Sand Test	6
Roundup® Ready Test	2
Tetrazolium Test	11
Endophyte Test	0
Ryegrass Fluorescence Test	175
Oats Fluorescence Test	85
400 Seed Count Test	76
Miscellaneous Test	6
Canada Noxious Weed Test	77
Seed Count Test	29
Total Tests	6,612

* Includes preliminary and final seedling counts.

SEED ACT ENFORCEMENT

In the enforcement of the Seed Act, Plant Industry Inspectors visit wholesale and retail firms to inspect seed labeling and obtain samples for testing. The inspectors collected 1,542 seed samples. A total of 124 lots or 8.04 % of these samples were found to be in violation of the Act, of which 101 (2,542 containers) were placed under 'Stop Sale' at 39 locations. The other 23 were either technical or minor violations not requiring a Stop Sale Order. Stop Sales are released when the owner or custodian of the seed follows the recommended procedure to have it relabeled in compliance with the law or otherwise disposed.

The tables on the following pages summarize the Seed Act Activities.

Table II is a comparison of the percentage of all violations for the past three years for all classes of seeds.

Table III summarizes the kinds of agriculture, vegetable and flower seeds tested with the number and percentage violation of each.

Table IV summarizes the inspection record of individual wholesale distributors giving total samples and number correctly labeled or in violation.

Table V represents a summary of crops, varieties and acres inspected by the seed certification program.

Table II

A comparison of violations of seed samples taken by seed inspectors.

Kinds	Number of Samples*	% Violations		
		7/1/2021 - 6/30/2022	7/1/2020 - 6/30/2021	7/1/2019 - 6/30/2020
Vegetable	799	5.63 %	3.13 %	2.51 %
Agricultural	192	15.63 %	5.40 %	11.16 %
Flower	271	5.17 %	9.20 %	4.91 %
Sprouting Seed	1	100.00 %	0.00 %	0.00 %
Pasture Mix or Blend	24	29.17 %	20.93 %	26.32 %
Vegetable Mix or Blend	25	8.00 %	0.00 %	0.00 %
Conservation Mix or Blend	3	0.00 %	80.00 %	60.00 %
Vegetable Kit	1	100.00 %	0.00 %	0.00 %
CSLT Grass Mix or Blend	160	11.25 %	15.67 %	20.00 %
Unidentified	0	0.00 %	0.00 %	0.00 %
CSLT Grass Single Kind	66	9.09 %	0.00 %	0.00 %
Totals	1,542	8.04 %	6.88 %	5.56 %

* Samples collected by seed inspectors 7/1/2021 - 6/30/2022

Explanation of abbreviations used in tables.

- CL - Correctly labeled.
- SV - Serious violation, discrepancy exceeds double the tolerance.
- MV - Minor violation, discrepancy exceeds regular tolerance.
- TV - Technical violation, label does not bear all required information.
- #VIOL - Number of violations.
- %VIOL - Percentage of violations.

Table III

Total of each kind tested, number and percentage of violations.

Seed Kind Tested	Vegetable Seeds						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Alfalfa	1	1	0	0	0	0	0.00 %
Artichoke	1	1	0	0	0	0	0.00 %
Arugula	9	8	1	0	0	1	11.11 %
Asparagus	2	2	0	0	0	0	0.00 %
Asparagus Bean (Yardlong)	2	1	1	0	0	1	50.00 %
Basil	20	19	1	0	0	1	5.00 %
Bean, Garden	34	27	7	0	0	7	20.59 %
Bean, Snap	1	0	1	0	0	1	100.00 %
Beet	22	20	2	0	0	2	9.09 %
Borage, Common	1	1	0	0	0	0	0.00 %
Broccoli	16	16	0	0	0	0	0.00 %
Broccoli Raab (Turnip Broccoli)	1	1	0	0	0	0	0.00 %
Brussels-Sprouts	7	7	0	0	0	0	0.00 %
Cabbage	14	14	0	0	0	0	0.00 %
Cabbage, Chinese	2	2	0	0	0	0	0.00 %
Cantaloupe	10	10	0	0	0	0	0.00 %
Carrot	33	33	0	0	0	0	0.00 %
Catnip	1	1	0	0	0	0	0.00 %
Cauliflower	11	11	0	0	0	0	0.00 %
Celery	2	2	0	0	0	0	0.00 %
Chamomile, Bodegold	1	1	0	0	0	0	0.00 %
Chamomile, Roman	1	1	0	0	0	0	0.00 %
Chervil	1	1	0	0	0	0	0.00 %
Chives	6	4	2	0	0	2	33.33 %
Chives, Garlic	1	1	0	0	0	0	0.00 %
Cilantro	5	5	0	0	0	0	0.00 %
Collards	3	3	0	0	0	0	0.00 %
Corn, Hybrid Sweet	6	6	0	0	0	0	0.00 %
Corn, Ornamental	1	1	0	0	0	0	0.00 %
Cornsalad	2	2	0	0	0	0	0.00 %
Cowpea	2	2	0	0	0	0	0.00 %

Seed Kind Tested	Vegetable Seeds						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Cress	1	0	1	0	0	1	100.00 %
Cress, Upland	1	0	1	0	0	1	100.00 %
Cress, Water	1	1	0	0	0	0	0.00 %
Cucumber	37	37	0	0	0	0	0.00 %
Cumin	1	1	0	0	0	0	0.00 %
Dill	10	10	0	0	0	0	0.00 %
Eggplant	11	11	0	0	0	0	0.00 %
Endive	5	5	0	0	0	0	0.00 %
Escarole	1	1	0	0	0	0	0.00 %
Fennel	2	2	0	0	0	0	0.00 %
Garden Bean	1	0	1	0	0	1	100.00 %
Gourd, Bottle	1	1	0	0	0	0	0.00 %
Gourds, Luffa (Dishcloth)	1	1	0	0	0	0	0.00 %
Kale	13	12	1	0	0	1	7.69 %
Kohlrabi	10	10	0	0	0	0	0.00 %
Lavender	3	3	0	0	0	0	0.00 %
Leek	2	2	0	0	0	0	0.00 %
Lemon Balm	3	3	0	0	0	0	0.00 %
Lettuce	37	34	3	0	0	3	8.11 %
Lima Bean	5	4	1	0	0	1	20.00 %
Malabar Spinach	2	2	0	0	0	0	0.00 %
Marjoram	1	1	0	0	0	0	0.00 %
Melons	2	2	0	0	0	0	0.00 %
Mung Bean	1	1	0	0	0	0	0.00 %
Mustard	8	8	0	0	0	0	0.00 %
Mustard, Chinese	1	1	0	0	0	0	0.00 %
Mustard, Leaf	1	1	0	0	0	0	0.00 %
New Zealand Spinach	1	1	0	0	0	0	0.00 %
Oat	1	0	1	0	0	1	100.00 %
Okra	6	6	0	0	0	0	0.00 %
Onion	12	10	2	0	0	2	16.67 %
Oregano	7	5	2	0	0	2	28.57 %
Pakchoi	3	3	0	0	0	0	0.00 %
Parsley	13	13	0	0	0	0	0.00 %
Parsnip	5	5	0	0	0	0	0.00 %
Pea, Garden	24	22	2	0	0	2	8.33 %
Pepper	27	27	0	0	0	0	0.00 %
Pepper, Hot	26	26	0	0	0	0	0.00 %
Perilla	1	1	0	0	0	0	0.00 %
Pole Bean	14	13	1	0	0	1	7.14 %
Popcorn	1	1	0	0	0	0	0.00 %

Seed Kind Tested	Vegetable Seeds						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Portulaca	1	1	0	0	0	0	0.00 %
Pumpkin	13	12	1	0	0	1	7.69 %
Radicchio	2	2	0	0	0	0	0.00 %
Radish	36	35	1	0	0	1	2.78 %
Rosemary	2	2	0	0	0	0	0.00 %
Rutabaga	4	4	0	0	0	0	0.00 %
Sage	3	2	1	0	0	1	33.33 %
Salad Greens	1	1	0	0	0	0	0.00 %
Senposai	1	1	0	0	0	0	0.00 %
Sesame	1	1	0	0	0	0	0.00 %
Shallot	2	2	0	0	0	0	0.00 %
Spinach	13	12	1	0	0	1	7.69 %
Squash	34	34	0	0	0	0	0.00 %
Squash, Autum-Winter	2	2	0	0	0	0	0.00 %
Stevia, sweet	1	0	1	0	0	1	100.00 %
Strawberry	1	1	0	0	0	0	0.00 %
Sunflower	1	1	0	0	0	0	0.00 %
Sweet Corn	22	22	0	0	0	0	0.00 %
Swiss Chard	14	13	1	0	0	1	7.14 %
Tarragon	1	1	0	0	0	0	0.00 %
Thyme	7	6	1	0	0	1	14.29 %
Tomatillo	2	2	0	0	0	0	0.00 %
Tomato	83	78	5	0	0	5	6.02 %
Turnip	10	10	0	0	0	0	0.00 %
Watermelon	16	15	1	0	0	1	6.25 %
Wheat	1	0	1	0	0	1	100.00 %
Zinnia	3	3	0	0	0	0	0.00 %
Total	799	754	45	0	0	45	5.63 %

Seed Kind Tested	Agricultural Seeds						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Alfalfa	8	5	3	0	0	3	37.50 %
Alkaligrass, Weeping	1	1	0	0	0	0	0.00 %
Barley	5	5	0	0	0	0	0.00 %
Birdsfoot Trefoil	4	2	1	0	1	2	50.00 %
Brome, Smooth	2	2	0	0	0	0	0.00 %
Buckwheat	3	3	0	0	0	0	0.00 %
Chewings Fescue	2	2	0	0	0	0	0.00 %
Chicory	1	1	0	0	0	0	0.00 %

Seed Kind Tested	Agricultural Seeds						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Clover, Alsike	1	1	0	0	0	0	0.00 %
Clover, Crimson	4	3	1	0	0	1	25.00 %
Clover, Ladino White	2	1	1	0	0	1	50.00 %
Clover, Red	5	4	1	0	0	1	20.00 %
Clover, Sweet	1	0	1	0	0	1	100.00 %
Clover, White	5	4	0	1	0	1	20.00 %
Corn, Hybrid Field	9	7	2	0	0	2	22.22 %
Crownvetch	1	0	1	0	0	1	100.00 %
Festulolium	1	1	0	0	0	0	0.00 %
Hairy Vetch	2	2	0	0	0	0	0.00 %
Hard Fescue	6	6	0	0	0	0	0.00 %
Hemp	4	3	1	0	0	1	25.00 %
Kentucky Bluegrass	3	2	0	0	1	1	33.33 %
Meadow Fescue	1	1	0	0	0	0	0.00 %
Oat	6	4	2	0	0	2	33.33 %
Orchardgrass	9	7	2	0	0	2	22.22 %
Pea, Field	4	3	1	0	0	1	25.00 %
Radish	1	1	0	0	0	0	0.00 %
Radish, Forage	1	1	0	0	0	0	0.00 %
Rape, Winter	1	1	0	0	0	0	0.00 %
Red Fescue	7	7	0	0	0	0	0.00 %
Redtop	1	1	0	0	0	0	0.00 %
Rye	17	13	4	0	0	4	23.53 %
Ryegrass, Annual	15	13	2	0	0	2	13.33 %
Ryegrass, Perennial	6	5	1	0	0	1	16.67 %
Sorghum	1	1	0	0	0	0	0.00 %
Sorghum-Sudangrass Hybrid	6	6	0	0	0	0	0.00 %
Soybean	4	4	0	0	0	0	0.00 %
Spelt	2	2	0	0	0	0	0.00 %
Sudangrass	1	1	0	0	0	0	0.00 %
Tall Fescue	13	12	1	0	0	1	7.69 %
Timothy	9	8	1	0	0	1	11.11 %
Triticale	4	3	1	0	0	1	25.00 %
Wheat	15	14	0	1	0	1	6.67 %
Total	194	163	27	2	2	31	15.98 %

Seed Kind Tested	Flower Seeds						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Alyssum montanum	4	4	0	0	0	0	0.00 %

Seed Kind Tested	Flower Seeds						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Alyssum, Sweet	5	5	0	0	0	0	0.00 %
Amaranthus	1	1	0	0	0	0	0.00 %
Asclepias (Butterfly Weed)	2	2	0	0	0	0	0.00 %
Asclepias (Milkweed)	1	1	0	0	0	0	0.00 %
Baby's Breath	1	1	0	0	0	0	0.00 %
Bachelor's Button	5	5	0	0	0	0	0.00 %
Balsam	1	1	0	0	0	0	0.00 %
Bells of Ireland	1	1	0	0	0	0	0.00 %
Bishop's Flower	1	1	0	0	0	0	0.00 %
Black-Eye Susan Vine	1	1	0	0	0	0	0.00 %
Black-Eyed Susan	2	2	0	0	0	0	0.00 %
Blue Fescue	1	1	0	0	0	0	0.00 %
Butterfly Flower	1	0	0	1	0	1	100.00 %
Butterfly-Bush	1	1	0	0	0	0	0.00 %
Calendula	3	2	1	0	0	1	33.33 %
California Poppy	3	3	0	0	0	0	0.00 %
Carnation	1	1	0	0	0	0	0.00 %
Celosia	5	5	0	0	0	0	0.00 %
Chinese Lanterns	1	1	0	0	0	0	0.00 %
Cleome	2	1	1	0	0	1	50.00 %
Cobaea Cup-And-Saucer Vine	1	1	0	0	0	0	0.00 %
Coleus	3	3	0	0	0	0	0.00 %
Columbine	3	3	0	0	0	0	0.00 %
Coneflower, Purple	1	0	0	1	0	1	100.00 %
Coreopsis, Large Flower	1	1	0	0	0	0	0.00 %
Coreopsis, Tall Plains	1	1	0	0	0	0	0.00 %
Corn, Ornamental	1	1	0	0	0	0	0.00 %
Cornflower	3	3	0	0	0	0	0.00 %
Cosmidium	1	1	0	0	0	0	0.00 %
Cosmos	11	10	1	0	0	1	9.09 %
Cucumber	1	1	0	0	0	0	0.00 %
Cypress Vine	2	2	0	0	0	0	0.00 %
Dahlia	1	1	0	0	0	0	0.00 %
Daisy, Shasta	1	1	0	0	0	0	0.00 %
Delphinium (Pacific Giants)	1	1	0	0	0	0	0.00 %
Dianthus	3	3	0	0	0	0	0.00 %
Dusty Miller	2	1	1	0	0	1	50.00 %
Echinacea	2	2	0	0	0	0	0.00 %
Echium (Vipers Bugloss)	1	1	0	0	0	0	0.00 %
Flanders Poppy	1	1	0	0	0	0	0.00 %
Forget-Me-Not	1	1	0	0	0	0	0.00 %

Seed Kind Tested	Flower Seeds						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Four O'clock	2	2	0	0	0	0	0.00 %
Foxglove	2	1	1	0	0	1	50.00 %
Gaillardia	1	1	0	0	0	0	0.00 %
Geranium	1	1	0	0	0	0	0.00 %
Gloriosa Daisy	1	1	0	0	0	0	0.00 %
Gomphrena	1	1	0	0	0	0	0.00 %
Gourd, Small-Seeded	1	1	0	0	0	0	0.00 %
Gourds, Large-Seeded	2	2	0	0	0	0	0.00 %
Gypsophila	2	2	0	0	0	0	0.00 %
Helichrysum	1	0	1	0	0	1	100.00 %
Hollyhock	2	2	0	0	0	0	0.00 %
Impatiens	1	1	0	0	0	0	0.00 %
Kale, Ornamental	1	1	0	0	0	0	0.00 %
Larkspur	2	2	0	0	0	0	0.00 %
Lavender	2	2	0	0	0	0	0.00 %
Lobelia	2	2	0	0	0	0	0.00 %
Lunaria	1	0	1	0	0	1	100.00 %
Lupine, Russell hybrids	1	1	0	0	0	0	0.00 %
Marigold, Pot	1	0	1	0	0	1	100.00 %
Marigolds	21	21	0	0	0	0	0.00 %
Mexican Sunflower	1	1	0	0	0	0	0.00 %
Moneyplant	1	1	0	0	0	0	0.00 %
Moonflower	1	1	0	0	0	0	0.00 %
Morning Glory	12	12	0	0	0	0	0.00 %
Nasturtium	12	12	0	0	0	0	0.00 %
Painted Daisy	1	1	0	0	0	0	0.00 %
Pansy, Common	1	1	0	0	0	0	0.00 %
Pea, Garden	1	1	0	0	0	0	0.00 %
Petunias	3	3	0	0	0	0	0.00 %
Phacelia	1	1	0	0	0	0	0.00 %
Phlox	1	1	0	0	0	0	0.00 %
Poppy	3	2	1	0	0	1	33.33 %
Poppy, Oriental	1	1	0	0	0	0	0.00 %
Poppy, Shirley	1	1	0	0	0	0	0.00 %
Portulaca	2	2	0	0	0	0	0.00 %
Rudbeckia	3	2	1	0	0	1	33.33 %
Salvia	5	5	0	0	0	0	0.00 %
Scabiosa (annual) /Mourning-bride	1	1	0	0	0	0	0.00 %
Snapdragon	4	4	0	0	0	0	0.00 %
Statice	1	1	0	0	0	0	0.00 %
Stock	2	2	0	0	0	0	0.00 %

Seed Kind Tested	Flower Seeds						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Strawflower	1	1	0	0	0	0	0.00 %
Sunflower	29	28	1	0	0	1	3.45 %
Sweet Pea, annual	4	4	0	0	0	0	0.00 %
Sweet William	1	0	1	0	0	1	100.00 %
Thunbergia	1	1	0	0	0	0	0.00 %
Tritoma	1	1	0	0	0	0	0.00 %
Verbascum	2	2	0	0	0	0	0.00 %
Vinca	2	2	0	0	0	0	0.00 %
Viola	2	2	0	0	0	0	0.00 %
Yarrow	1	1	0	0	0	0	0.00 %
Zinnia	34	34	0	0	0	0	0.00 %
Total	269	255	12	2	0	14	5.20 %

Seed Kind Tested	Feed						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Feed	3	3	0	0	0	0	0.00 %

Seed Kind Tested	Pasture Mix or Blend						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Pasture Mix or Blend	24	17	5	2	0	7	29.17 %

Seed Kind Tested	Flower Mix or Blend						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Flower Mix or Blend	4	4	0	0	0	0	0.00 %

Seed Kind Tested	Vegetable Kit						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Vegetable Kit	1	0	1	0	0	1	100.00 %

Seed Kind Tested	CSLT Grass Mix or Blend						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
CSLT Grass Mix or Blend	160	142	16	2	0	18	11.25 %

Table IV

Vegetable Seeds Wholesale Distributors			Vegetable Seeds			
			CL	SV	TV	MV
AMERICAN SEED CO INC	SPRING GROVE	PA	4	0	0	0
BACK TO THE ROOTS	OAKLAND	CA	2	0	0	0
BONNIE PLANTS, LLC	OPELIKA	AL	0	1	0	0
BOTANICAL INTERESTS INC	BROOMFIELD	CO	1	1	0	0
BURPEE GARDEN PRODUCTS	WARMINSTER	PA	525	29	0	0
FISHERS GREENHOUSE & GARDEN CENTER LLC	STRASBURG	PA	4	0	0	0
GREEN GARDEN PRODUCTS	NORTON	MA	11	4	0	0
HAKES FARM & SEED SERVICE	RED LION	PA	6	0	0	0
HENRY F MICHELL, CO.	KING OF PRUSSIA	PA	26	1	0	0
LAKE VALLEY SEED COMPANY, INC.	BOULDER	CO	4	0	0	0
MODERN SPROUT LLC	CHICAGO	IL	0	1	0	0
OUTSTANDING SEED CO, LLC	BEAVER FALLS	PA	1	0	0	0
P L ROHRER & BRO, INC.	LANCASTER	PA	48	1	0	0
SEEDS OF CHANGE	COMPTON	CA	1	0	0	0
SEEDWAY, LLC	HALL	NY	99	1	0	0
SINGING SPRING SEEDS	STRASBURG	PA	3	3	0	0
SOUTHERN STATES COOP, INC.	RICHMOND	VA	13	2	0	0
TASC LLC	ASBURY PARK	NJ	0	1	0	0
THE PAGE SEED COMPANY	GREENE	NY	2	0	0	0
WEST YORK AGWAY	YORK	PA	1	0	0	0
ZIMMEY'S GREENHOUSE	MYERSTOWN,	PA	3	0	0	0
		Total	754	45	0	0

Agricultural Seeds Wholesale Distributors			Agricultural Seeds			
			CL	SV	TV	MV
AMERICAN SEED CO INC	SPRING GROVE	PA	0	1	0	0
BARENBRUG USA	TANGENT	OR	2	0	0	0
BAYER CROPS SCIENCE LP	CHESTERFIELD	MO	1	0	0	0
BEATTY SEEDS LTD	BLOOMFIELD	ON	0	1	0	0
BFG SUPPLY DBA WETSEL	CHESWICK	PA	22	5	0	1
BURPEE GARDEN PRODUCTS	WARMINSTER	PA	2	0	0	0
CENTRAL FARM AND GARDEN	WOOSTER	OH	1	0	0	0
CHANNEL BIO LLC	SAINT LOUIS	MO	0	1	0	0
CHEMGRO SEEDS	EAST PETERSBURG	PA	6	1	0	0
CORTEVA AGRISCIENCE MCS LLC	JOHNSTON	IA	1	0	0	0
DAIRYLAND SEEDS	WOODLAND	CA	1	0	0	0
DLF PICKSEED	HALSEY	OR	4	0	0	0
FISHER'S FARM SEEDS	ELIZABETHVILLE	PA	0	1	0	0
FM BROWN'S SONS, INC.	SINKING SPRING	PA	6	0	0	1

Agricultural Seeds Wholesale Distributors			Agricultural Seeds			
			CL	SV	TV	MV
GREENWAY ANIMAL NUTRITION	CLINTON	ON	0	1	0	0
GROWMARK FS LLC	YORK	PA	3	0	0	0
GROWMARK FS LLC	MILFORD	DE	1	0	0	0
GROWMARK FS, LLC	MILFORD	DE	3	0	0	0
GROWMARK INC	BLOOMINGTON	IL	19	1	0	0
GROWMARK, INC	BLOOMINGTON	IL	2	0	0	0
HADLEY SEED FARM	HADLEY	PA	3	0	0	0
HAKES FARM & SEED SERVICE	RED LION	PA	1	0	0	0
HELENA AGRI-ENTERPRISES	FREDERICK	MD	4	0	0	0
HORST HYBRID SEEDS	CHAMBERSBURG	PA	2	1	0	0
HURST AG SEEDS & SERVICES, LLC	LEOLA	PA	1	0	0	0
INTERNATIONAL HEMP LLC	DENVER	CO	3	1	0	0
JUDSONS INC	COLUMBIA CROSS ROADS	PA	0	1	0	0
LEABROOK AG	LANCASTER	PA	7	2	0	0
LEBANON VALLEY AG PRODUCTS	MYERSTOWN	PA	2	1	0	0
LOCAL SEED COMPANY, LLC.	MEMPHIS	TN	3	0	1	0
LOVELAND PRODUCTS, INC	GREELEY	CO	1	0	0	0
MARTIN'S AG. SERVICE INC.	NEW HOLLAND	PA	1	0	0	0
MID-ATLANTIC SEEDS, INC.	YORK	PA	1	0	0	0
NORTHAMPTON COUNTY SEED, CO.	NAZARETH	PA	1	0	0	0
NUTRIEN AG SOLUTIONS, INC.	TYRONE	PA	1	0	0	0
ONTARIO SPECIALTY GRAINS	TILLSONBURG	ON	1	0	0	0
P L ROHRER & BRO, INC.	LANCASTER	PA	7	0	0	0
PREFERRED SEED COMPANY, INC.	BUFFALO	NY	4	4	0	0
SCHLESSMAN SEED CO.	MILAN	OH	2	0	0	0
SCHWARTZ FARMS	CORTLAND	OH	1	0	0	0
SEED CONSULTANTS, INC.	WASHINGTON COURT HOUSE	OH	1	0	0	0
SEEDTIME	EAST PETERSBURG	PA	1	0	0	0
SEEDWAY, LLC	HALL	NY	38	4	0	0
SOUTHERN STATES COOP, INC.	RICHMOND	VA	1	0	0	0
W I MILLER & SONS	FARMDALE	OH	0	0	1	0
WEST YORK AGWAY	YORK	PA	1	0	0	0
		Total	162	26	2	2

Flower Seeds Wholesale Distributors			Flower Seeds			
			CL	SV	TV	MV
BURPEE GARDEN PRODUCTS	WARMINSTER	PA	191	5	0	0
GREEN GARDEN PRODUCTS	NORTON	MA	1	0	0	0
HENRY F MICHELL, CO.	KING OF PRUSSIA	PA	16	0	0	0
MODERN SPROUT LLC	CHICAGO	IL	0	1	0	0

Flower Seeds Wholesale Distributors			Flower Seeds			
			CL	SV	TV	MV
P L ROHRER & BRO, INC.	LANCASTER	PA	8	0	0	0
PLANTATION PRODUCTS, LLC	NORTON	MA	1	0	0	0
ROSY RINGS	BROOMFIELD	CO	0	1	0	0
SEEDWAY, LLC	HALL	NY	40	5	2	0
		Total	257	12	2	0

Feed Wholesale Distributors			Feed			
			CL	SV	TV	MV
BARENBRUG USA	TANGENT	OR	1	0	0	0
NEIGER MILLING COMPANY, H W	LAKE CITY	PA	1	0	0	0
SEREDAY'S TRUE VALUE	WEST MIDDLESEX	PA	1	0	0	0
		Total	3	0	0	0

Sprouting Seed Wholesale Distributors			Sprouting Seed			
			CL	SV	TV	MV
BURPEE GARDEN PRODUCTS	WARMINSTER	PA	0	1	0	0
		Total	0	1	0	0

Pasture Mix or Blend Wholesale Distributors			Pasture Mix or Blend			
			CL	SV	TV	MV
AMERICAN SEED CO INC	SPRING GROVE	PA	1	0	0	0
BARENBRUG USA	TANGENT	OR	1	0	0	0
CHEMGRO SEEDS	EAST PETERSBURG	PA	1	0	1	0
GROWMARK INC	BLOOMINGTON	IL	1	0	0	0
GROWMARK, INC	BLOOMINGTON	IL	3	0	0	0
HARRELL'S	YORK	PA	1	0	0	0
KILLER FOOD PLOTS LLC	COOPERSVILLE	MI	0	1	0	0
KING'S AGRI SEEDS, INC.	LANCASTER	PA	4	3	0	0
LEBANON SEABOARD CORP	LEBANON	PA	1	0	0	0
LOCAL SEED COMPANY, LLC.	MEMPHIS	TN	0	1	0	0
P L ROHRER & BRO, INC.	LANCASTER	PA	1	0	0	0
PREFERRED SEED COMPANY, INC.	BUFFALO	NY	1	0	0	0
SEEDWAY, LLC	HALL	NY	2	0	1	0
		Total	17	5	2	0

Flower Mix or Blend Wholesale Distributors			Flower Mix or Blend			
			CL	SV	TV	MV
BURPEE GARDEN PRODUCTS	WARMINSTER	PA	2	0	0	0
ENCAP, LLC	GREEN BAY	WI	1	0	0	0

Flower Mix or Blend Wholesale Distributors			Flower Mix or Blend			
			CL	SV	TV	MV
PLANTATION PRODUCTS, LLC	NORTON	MA	1	0	0	0
		Total	4	0	0	0

Vegetable Mix or Blend Wholesale Distributors			Vegetable Mix or Blend			
			CL	SV	TV	MV
BURPEE GARDEN PRODUCTS	WARMINSTER	PA	21	2	0	0
SEEDWAY, LLC	HALL	NY	2	0	0	0
		Total	23	2	0	0

Conservation Mix or Blend Wholesale Distributors			Conservation Mix or Blend			
			CL	SV	TV	MV
JMD COMPANY	BETHEL PARK	PA	1	0	0	0
SEEDWAY, LLC	HALL	NY	1	0	0	0
SYNATEK, LP	SOUDERTON	PA	1	0	0	0
		Total	3	0	0	0

Vegetable Kit Wholesale Distributors			Vegetable Kit			
			CL	SV	TV	MV
MODERN SPROUT LLC	CHICAGO	IL	0	1	0	0
		Total	0	1	0	0

CSLT Grass Mix or Blend Wholesale Distributors			CSLT Grass Mix or Blend			
			CL	SV	TV	MV
ALBERT LEA SEED HOUSE	ALBERT LEA	MN	0	1	0	0
AMERICAN SEED CO INC	SPRING GROVE	PA	6	0	0	0
AMTURF ENTERPRISES, LLC	JEFFERSON	OR	1	0	0	0
ANDRE & SON, INC.	MONTROSE	PA	3	1	0	0
BARENBRUG USA	TANGENT	OR	4	1	0	0
BEDFORD FARM BUREAU COOP	BEDFORD	PA	1	0	0	0
BFG SUPPLY DBA WETSEL	CHESWICK	PA	9	2	0	0
BLUE MOUNTAIN LANDSCAPE SUPPLIES	WIND GAP	PA	1	0	0	0
CENTRAL FARM AND GARDEN	WOOSTER	OH	2	0	0	0
CENTRAL TURF & IRRIGATION	ELMSFORD	NY	3	0	0	0
CHEMGRO SEEDS	EAST PETERSBURG	PA	0	1	0	0
CONSERVATION RESOURCES, LLC	PIPERSVILLE	PA	2	0	0	0
DLF PICKSEED	HALSEY	OR	1	0	0	0
FISHER & SON COMPANY, INC.	EXTON	PA	8	0	0	0

CSLT Grass Mix or Blend Wholesale Distributors			CSLT Grass Mix or Blend			
			CL	SV	TV	MV
FM BROWN'S SONS, INC.	SINKING SPRING	PA	1	1	0	0
GENESIS TURFGRASS INC	GLEN ROCK	PA	3	0	0	0
GREENLEAF TURF SOLUTIONS INC	NEWARK	DE	2	0	0	0
GROWMARK INC	BLOOMINGTON	IL	9	0	0	0
HARRELL'S	YORK	PA	1	0	0	0
HINES FEED STORE	HOLLIDAYSBURG	PA	1	0	0	0
HISTANDS SUPPLY	WYCOMBE	PA	2	0	0	0
HORSTDALE FARM SUPPLY LLC	GREENCASTLE	PA	0	0	1	0
JERSEY SEED INC.	NEW BRUNSWICK	NJ	4	0	0	0
JMD COMPANY	BETHEL PARK	PA	2	0	0	0
JONATHAN GREEN, INC.	FARMINGDALE	NJ	1	0	0	0
KING'S AGRI SEEDS, INC.	LANCASTER	PA	3	0	0	0
LEBANON SEABOARD CORP	LEBANON	PA	15	3	0	0
LESCO, INC.	CLEVELAND	OH	13	1	0	0
LIFETIME SEED, CO.	EAST PEORIA	IL	1	0	0	0
MID-ATLANTIC SEEDS, INC.	YORK	PA	0	0	1	0
NORTHAMPTON COUNTY SEED, CO.	NAZARETH	PA	4	0	0	0
P L ROHRER & BRO, INC.	LANCASTER	PA	3	0	0	0
PENNINGTON SEED, INC.	GREENFIELD	MO	0	1	0	0
PREFERRED SEED COMPANY, INC.	BUFFALO	NY	0	1	0	0
REED & PERRINE	TENNENT	NJ	2	0	0	0
SEEDWAY, LLC	HALL	NY	22	2	0	0
SEETON TURF WAREHOUSE C/O NOBLE TURF	MOUNT LAUREL	NJ	1	0	0	0
SYNATEK, LP	SOUDERTON	PA	7	0	0	0
THE LAWN DEPOT INC	DOYLESTOWN	PA	2	0	0	0
THE SCOTTS COMPANY	MARYSVILLE	OH	1	0	0	0
THE SCOTTS COMPANY	MARYSVILLE	OH	0	1	0	0
WALKER SUPPLY INC	CORAOPOLIS	PA	1	0	0	0
		Total	142	16	2	0

CSLT Grass Single Kind Wholesale Distributors			CSLT Grass Single Kind			
			CL	SV	TV	MV
ALLIANCE SEED INC	BROOKLYN	NY	7	0	0	0
AMERICAN SEED CO INC	SPRING GROVE	PA	1	0	0	0
BFG SUPPLY DBA WETSEL	CHESWICK	PA	20	2	0	0
F M BROWN'S SONS, INC.	SINKING SPRING	PA	2	0	0	0
FISHER & SON COMPANY, INC.	EXTON	PA	1	0	0	0
FM BROWN'S SONS, INC.	SINKING SPRING	PA	6	0	0	0
FOSTERS SEED & FEED LTD	BEAVERLODGE	AB	1	0	0	0
GROWMARK INC	BLOOMINGTON	IL	1	2	0	0

CSLT Grass Single Kind Wholesale Distributors			CSLT Grass Single Kind			
			CL	SV	TV	MV
HISTANDS SUPPLY	WYCOMBE	PA	2	0	0	0
HURST AG SEEDS & SERVICES, LLC	LEOLA	PA	1	0	0	0
KING'S AGRI SEEDS, INC.	LANCASTER	PA	0	1	0	0
LESCO, INC.	CLEVELAND	OH	1	0	0	0
MID-ATLANTIC SEEDS, INC.	YORK	PA	3	0	0	0
NORTHAMPTON COUNTY SEED, CO.	NAZARETH	PA	1	0	0	0
PENNINGTON SEED	EASTON	PA	1	0	0	0
SEEDWAY, LLC	HALL	NY	12	1	0	0
		Total	60	6	0	0

Number of Samples per fiscal Year

(July 1st - June 30th)

