

PA Noxious Weed Alert McKean County and Surrounding Areas

GOATSRUE

Galega officinalis



Goatsrue

Goatsrue is a federally listed noxious weed with a limited nationwide distribution. The largest site is a county in Utah, which in 1981 reported 38,000 acres (60 square miles) of infested cropland, irrigation waterways, pastures, fence lines, roadways and wet, marshy areas. Goatsrue is capable of forming a monoculture in wetland communities, displacing native or beneficial plants. Goatsrue is also fatal to most animals if ingested, and is particularly unpalatable and toxic to sheep and cattle. (Evans et al. 1997).

History

In 1891, goatsrue was introduced from the Middle East to Utah, where it was tested for three years as livestock forage, or a green manure crop. It was discovered after its introduction to be unpalatable and toxic (lethal) to sheep. Over the next 86 years, this plant slowly spread to cover a 60 square mile area in Cache County, Utah, where it is primarily found in highline canals and in drainage systems of valley floors.

In 1981 USDA/APHIS declared goatsrue a federal noxious weed and targeted it for eradication. An herbarium search found plants from 1890 to 1960, from 10 continental states and Washington D.C. (Evans et al. 1997).

Since then, APHIS has been working cooperatively with state agencies to identify populations and limit any further spread of this federal noxious weed.

Goatsrue in Pennsylvania

Goatsrue was discovered in Pennsylvania at only six locations in 1998 as a result of these USDA CAPS surveys. Three of these locations were in McKean County. It was added to the Pennsylvania Noxious Weed Control List in 2000. Additional surveys conducted in 2009 identified more goatsrue populations throughout McKean County in the vicinity of Smethport. This particular infestation appears to be related to the dredging of Hamlin Lake and subsequent dispersement of goatsrue in the lake dredgings. A few isolated sites were also discovered in Elk, Cameron and Potter counties and are related to the movement of contaminated aggregate.

Goatsrue Control Program

PDA is surveying and assisting property owners in the affected counties with control measures to prevent the flowering of this noxious weed

and enforce the state eradication program. Upon discovery on private property, a homeowner packet with additional information about the program is distributed. As of 2010, only 50 acres of goatsrue had been detected scattered through the region. The Secretary of Agriculture may issue a **Noxious Weed Control Order** to an individual landowner requiring they implement measures for containment of contaminated aggregate to limit further spread of this poisonous plant.

How You Can Help

If you believe you have discovered a goatsrue population, please report it by calling the PA Noxious Weed Hotline at 1-877-464-9333.



pennsylvania
DEPARTMENT OF AGRICULTURE



Goatsrue inflorescence with flowers in a raceme



Goatsrue elliptic leaf shape and size



Goatsrue plant form and size

Goatsrue Description

A herbaceous perennial, typically 40 inches tall or more at maturity (3-5 feet). Leaves are pinnately compound, up to 8.7 in. long, with 11-17 elliptic to lanceolate leaflets, 0.4 in.

to 2.0 in. long. The inflorescence is composed of 20-50 purple to white flowers, each about 0.4 in. long, arranged in terminal or axillary racemes. Flowering begins in June and continues throughout the growing season. Each flower produces a small pea pod, with up to 9 seeds. The dull, mustard yellow pods are oblong and 1 to 1.2 in. long.



Goatsrue in July



Wild Licorice Spike

istic visible even when the plant is very young and still evident as it gains height and stature.

Another species similar looking to goatsrue is wild licorice. **Wild licorice** is an erect perennial which can grow up to 3 feet tall and can be found in McKean County. However, the stem, unlike that of goatsrue, is covered with minute, sticky hairs and it has cream colored flowers crowded on a terminal spike. The fruit is brown and covered with hooked spines.

Note: One roadside or flower garden species is a *Lathyrus* species called **vetchling pea** which is poisonous but can be differentiated from goatsrue by its winged stem, vining growth and single "pea flower".

Similar species

Two roadside *Vicia* species or vetches look the most similar to goatsrue but are not poisonous. The raceme of **hairy vetch** is a dark purple and the leaflets are much smaller. The flowers of **crown vetch** are pinker and are in an umbel and the leaflets are smaller. Also, goatsrue leaves are folded as they emerge—a character-



Hairy Vetch Raceme



Crown Vetch Umbel

Biology/Ecology

Goatsrue emerges in early April either from the seedbank as cotyledons or from regrowth of perennial taproots. After the first season, goatsrue plants begin to form dense crowns capable of regenerating for several seasons. The plants then spread by rhizomes and by seeds along waterways and roadside edges. Spread is often associated with localized flooding and or the subsequent ditch cleaning of storm damaged drainage ditches. In McKean County, goatsrue infestations are primarily limited to state, county and local road shoulders and ditches, and adjoining areas of Potato Creek and Marsh Creek.

