

NOXIOUS WEEDS

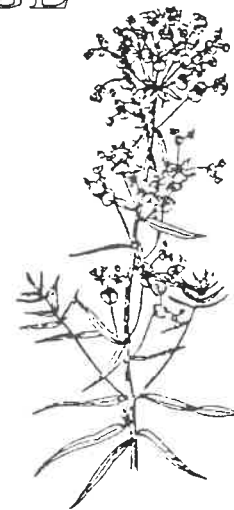
Status: Introduced

LEAFY SPURGE

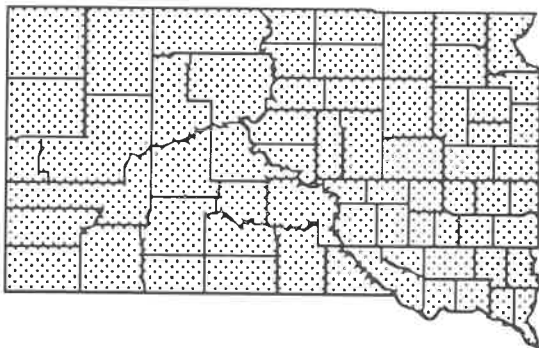
(*Euphorbia esula*)

Description

The scientific name of leafy spurge (*Euphorbia esula*) can be literally translated from the Greek to mean "good pasture for eating." Sources indicate that name was given to the plant by the King of Mauritania, naming it after his physician Euphorbos for his use of the plant. Leafy spurge has long, narrow, drooping, dark green leaves 1.5 to 4 inches (3.8 to 10.2 cm) long that grow alternately on the stem. The plant grows 2 to 3 feet (61 to 91.4 cm) tall. Spurge can be easily identified by its small green flowers surrounded by yellow green bracts. The dark brown roots have pink buds and may grow to a depth of 20 feet (6.09 m) below ground.



Distribution



Originally from Europe, leafy spurge is considered in South Dakota to be a statewide *noxious weed*. It is common in pasture and grassland habitats as well as in cultivated fields and woodlands.

Natural History

Leafy spurge is a *perennial* plant and a very difficult weed to control due to its extensive and deep root system. If the plant is cut down, new shoots arise from pink buds located on the roots. The plant is very hardy because a 2 to 3 year supply of food is stored in its root system. Besides vertical roots, the plant sends out horizontal roots that can produce new plants. These attributes explain why leafy spurge is considered a creeping *perennial*. The plant also reproduces sexually by releasing seeds from a three-celled capsule. When ripe, the seed capsule explodes, propelling the seeds up to 15 feet (4.6 m) away from the parent plant. Leafy spurge can produce up to 140 seeds per plant. Leafy spurge is part of the plant family Euphorbiaceae, another member of this family is the rubber tree, *Hevea Brasiliensis*. Leafy spurge, just like rubber trees, has milky liquid found throughout the plant. The milky juice in

leafy spurge is poisonous. It is an irritant to human skin, can cause hair loss around the hooves of horses and cattle, and if eaten by livestock, can irritate their digestive tract and may cause death.

Management Considerations

According to the SDSU Cooperative Extension Service, nearly 4 million acres of land in South Dakota are infested by noxious weeds. It is estimated that statewide losses from noxious weeds costs more than \$70 million annually.

With its ability to quickly reproduce, leafy spurge is one of the most troublesome noxious weeds in South Dakota. Once it is established, it out-competes all other plant life. Measures to control leafy spurge must include a variety of methods from crop rotation to chemical applications. Even after many years, plants may

reappear in a field. Another method of control is the use of biological control agents. An example would be the introduction of a natural plant pest, such as an insect. When using this method the goal is control of the weed, not total eradication. In the Dakotas and Nebraska, biological control of leafy spurge has involved the introduction of flea beetles. Adult flea beetles feed on the leafy spurge foliage and are of minimal harm to the plant. But, the beetle's larval stage destroys the plant's root system.

The South Dakota Weed and Pest Control Commission has the legal responsibility for developing and implementing a statewide control program for all noxious weeds. South Dakota law requires that all land owners control noxious weeds on their land. If land owners do not comply with noxious weed control requirements, fines, tax levies, and liens against their land could result.

Glossary

Bract - a modified leaf growing at the base of a flower.

Noxious weed - designation of the State Weed Control Board. These are weeds that are difficult to control once they are established.

Perennial - a plant that lives more than two years.

References

- Agricultural Research Service of USDA, *Common Weeds of the United States*, 1971. Dover Publications Inc. NY.
- Agricultural Extension Service, South Dakota State University *South Dakota Weeds*, 1974. South Dakota Weed Control Commission.
- Cooperative Extension Service, South Dakota State University U.S. Department of Agriculture. *Noxious Weeds of South Dakota Extension Special Series 34*.
- Klingman Glenn C., *Weed Science*, 1982. John Wiley & Sons Inc. NY.
- Zimdahl, Robert L., 1989. *Weeds and Words The Etymology of the Scientific names of Weeds and Crops*. Iowa State University, Ames, Iowa.

Selected Resources For Teachers

- Noxious Weeds of South Dakota*, Extension Special Series 34, 1993. Cooperative Extension Service, SDSU, Brookings, SD 57007.
- South Dakota/Nebraska Weed Identification Guide*, 1994. Black Hills RC&D Office, 515 9th Street, Rapid City, SD 57701-2663.

Written by:

John Neff, USDA Americorp member, Fort Pierre, SD. 57532. © 1996.

Reviewed by:

Leon Wrage, Extension Weed Specialist, SDSU, Brookings, SD.

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