

LEAFY SPURGE



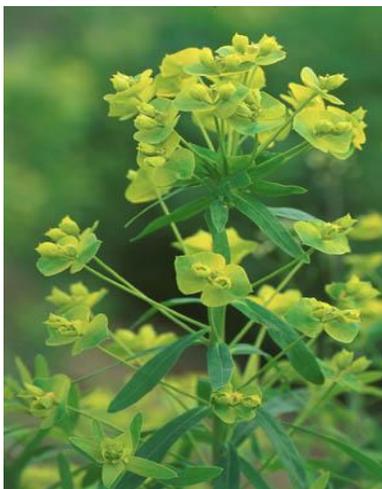
Leafy spurge (*Euphorbia esula*) is a stubborn, alien, perennial weed that is designated noxious in both the Idaho Noxious Weed Law and the Idaho Seed Law. It was introduced into Massachusetts before 1872 and has since spread westward in the northern United States and Canada. Leafy spurge was first found in Idaho in the early 1900s. It is not widespread locally, but has been reported in patches throughout the region.

Leafy spurge thrives in gravelly mountain soils and does well in most other soils of the state. Although it is primarily a problem on land that receives limited cultivation, it also threatens cultivated lands. It grows in environments from semi-arid to shallow aquatic.

Most spurges contain toxic chemicals. Leafy spurge contains the alkaloid euphorbon, a milky latex substance that can cause blisters, dermatitis, and blindness in humans, cattle, and horses. The root sap gives off a substance that inhibits the growth of grasses and other desirable plants in the surrounding soil. Cattle tend to avoid leafy spurge, but sheep and goats learn to favor it, and with appropriate attention will thrive on it.



Identification



Leafy spurge plants can be recognized by their long, narrow leaves that are usually less than $\frac{1}{4}$ inch wide and 2 to 3 inches long and by the yellow-green cast of the bracts from mid-summer until fall. In early spring the plants are dark green. They usually appear in patches but may be scattered throughout cultivated fields. They often grow in clusters from a vertical spreading root.

Mature leafy spurge plants normally attain a height of 1 to 3 feet. The stems are erect and usually single, branching only toward the top. The long, narrow leaves are alternated and crowded. A distinctive milky sap is readily seen by breaking a stem, leaf or root.

From late May to July, inconspicuous flowers without petals develop on the tips of short terminal branches. More noticeable than the flowers are the broad, heart-shaped bracts that occur opposite each other near the bases of the flowers. The bracts turn yellow as the plants approach maturity and commonly are mistaken for yellow flowers. The bracts give the infestation a distinctive yellow-green top color from mid-June until the onset of cool nights or frosts. After fall frost, the leaves turn red.

Each flower produces a three-chambered capsule with one seed in each chamber. The seeds are egg-shaped, about $\frac{1}{10}$ inch long and nearly as wide. They vary in color from gray to brown or slightly purple but are usually grayish, often flecked with brown or yellow.

Old leafy spurge crowns are semi-woody. The crown bases are typically pinkish due to numerous, ever-present new stem buds. The root system is composed of thick roots that penetrate the soil 8 to 20 feet. Although the stem buds are most conspicuous in the old crown, many appear on the entire root system. Older plants have horizontal roots that enable the colony to enlarge by underground growth.

How Infestations Spread

Leafy spurge spreads by seeds and roots. As the chambers of the seed capsule ripen, unequal pressures cause the capsule to explode, throwing the seeds as far as 20 feet.

The plant's numerous vegetative buds and its ability to throw its seeds enables it to spread rapidly. Spread is accelerated when seeds and root sections are moved by tillage equipment, vehicle tires, mammals, and birds.

Methods of Control

Herbicides: Picloram (Tordon 22K® RTU) applied in spring or fall will give season-long suppression of leafy spurge. Annual follow-up treatments are necessary. 2,4-D (various brand names) or dicamba + 2,4-D (Weedmaster, Rangestar, etc) will provide some control, but **must be applied 2 to 4 times each growing season**. A new product Overdrive® (dicamba + diflufenzopyr) + 2,4-D or picloram has shown good results on properties in Kootenai County.

Non-Chemical: Fertilization and pasture health is extremely important. Mow and pull to prevent the seed production. The sap of leafy spurge is **toxic**; skin and eye protection is needed when handling this plant. DO NOT CULTIVATE; new plants form from root segments.

Biological: There are six flea beetles available for leafy spurge that, in the adult form, feed on leaves and flowers. The larvae of these insects feed on root hairs and young roots. The redheaded leafy spurge stem borer larvae feed on the stem and crown. Sheep, goats, and hogs will graze leafy spurge. It is not only satisfactory forage for these animals, but they actually prefer it. Constant grazing slows the weed.

Idaho State law places the responsibility of noxious weed control on the landowner (Idaho Code 22-2441). To assist in this effort and **at no charge**, our department offers site inspections, herbicide and application advice, and loan-out backpack sprayers. A separate cost share program is offered for properties with leafy spurge: please call us at **(208) 446-1290** for additional information and a positive identification of this noxious weed.

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Kootenai County does not discriminate against individuals or groups on the basis of disability in the admission or access to, or treatment in, its public meetings, programs, or activities. Requests for assistance or accommodations can be arranged by contacting the Noxious Weed Control Department at (208) 446-1290 with 3 days advance notice.