

Leafy Spurge *Euphorbia esula*

IMPORTANT: Euphorbias have also been called milkwort or milkweed, besides spurge and euphorbs because of the milky sap/latex that seeps from the plant when it is cut or torn. The white latex or sap is considered a human health hazard. It can cause severe dermatitis in humans and animals. Upon eye contact, the latex can cause human blindness because it burns the cornea of the eye. Additionally, this latex has co-carcinogenic factors, which increase the cancer-causing properties of other substances. Most Euphorbia species are considered toxic.



Leafy spurge, *Euphorbia esula*, is a Class B Designate Noxious Weed for both Washington State and Spokane County. Preventing infestations in these areas is a high priority. This is a Class B Noxious Weed because it is an extremely aggressive plant. Once established, it has a tendency to displace all other desirable vegetation in pastures, hay fields, rangelands, natural areas and cultivated lands by shading out, using available water and nutrients and through plant toxins that prevent the growth of other plants underneath it.

Leafy spurge has been found in 18 counties in the State of Washington, both east and west of the Cascade Mountains. The largest infestations are in the northeastern part of the state, which includes the Inland Northwest. In Spokane County it is primarily found in the West Plains area.

It grows 1 to 3 feet tall from a single, erect stem that may branch at the top. The alternate, narrow leaves are about ¼ inch wide to 3 to 4 inches long. The flowers are present around mid-June and are yellowish-green, small, and arranged in numerous small clusters. The flowers themselves are inconspicuous compared to the obvious yellow-green, heart-shaped bracts that occur opposite one another at the base of these flowers and open in late May or early June. These bracts give the infestations a distinctive yellow-green color through the summer, until the fall frosts turn the foliage red.

Seeds are oblong, grayish to purple, contained in a 3-celled capsule. Studies in the Midwest indicate that seed production in spurge patches averages 2,500 seeds, with 60 to 80 percent of the seeds being viable. Seeds, which can be produced through late July to early August, can survive in the soil for at least 5 to 7 years. When the seed is ripe the dried capsule bursts, sending the mature seeds as far as 15 feet away from the plant. They can be carried further by water and wildlife. Leafy spurge can spread vegetatively at a rate of several feet per year. It has an extensive root system that can extend 15 or more feet in the soil. Leafy spurge tolerates moist to dry soil



conditions, but is the most aggressive under dry conditions where the competition from the native flora is reduced.

Control for this noxious weed is very difficult because of its extensive root system. Any control program, including herbicides, must be long term and can be an expensive undertaking. If left uncontrolled for a single year, leafy spurge can reestablish itself rapidly. Prevention of new infestations is critical to the control of this plant. Do not allow the plant to go to seed. Hand pulling repeatedly will prevent seed production, but be sure to wear gloves because of the toxic nature of this plant. Cultivation is not recommended because it creates root fragments that will further spread the plant. Establishing competitive vegetation in combination with the use of certain selective herbicides can be effective. Several systemic herbicides have been found to be effective if applied in June when the flowers and seeds are developing or in mid-September, when the plants are moving nutrients downwards into their root system.

Biological control offers a very promising management tool for leafy spurge. In its native Europe and Asia, leafy spurge has developed enough natural enemies (insects, diseases) over time to control it so it is an insignificant plant in the landscape. This weed's natural enemies do not occur here because of its relatively recent introduction into this part of the world. The U.S. Department of Agriculture has shown success using six natural enemies of the leafy spurge from Europe. The results are not as immediate as when herbicides are used, but if pesticide use is kept to a minimum, large numbers of these natural enemies build up within a few years and have shown impressive results.

Resources:

PNW Weed Management Handbook

Hortsense—<http://pep.wsu.edu/hortsense>

Weeds of the West

Spokane County Noxious Weed Control Board

Washington State Noxious Weed Control Board

Booklet--Selected Noxious Weeds of Washington State