## NOXIOUS WEEDS ARE EVERYONE'S CONCERN

Noxious weeds compete with pastures and crops, reducing yields substantially. Some noxious weeds are directly poisonous or injurious to man, livestock and wildlife. The losses resulting from noxious weed infestations can be staggering, costing residents of Nebraska millions of dollars due to production losses. This not only directly affects the landowner, but erodes the tax base for all residents in the State of Nebraska.

The business of noxious weed control is everyone's concern, and noxious weed control benefits everyone. The support of all individuals within the state is needed and vital for the control of noxious weeds within Nebraska. It is the duty of each person who owns land to effectively control noxious weeds on their land.

If you have questions or concerns about noxious weeds, please contact your local county noxious weed control authority or the Nebraska Department of Agriculture.


Material derived from *Weeds of the Great Plains*, published by the Nebraska Department of Agriculture.

For more information, visit **nda.nebraska.gov**.

# LEAFY SPURGE

## NEBRASKA NOXIOUS WEED

**PREPARED BY THE**
**NEBRASKA DEPARTMENT OF AGRICULTURE**
**AND THE**
**NEBRASKA WEED CONTROL ASSOCIATION**

## LEAFY SPURGE FACTS

**Common Name:** Leafy spurge (wolf's milk, cypress spurge)

**Growth Form:** Forb

**Life Span:** Perennial

**Origin:** Eurasia

**Flowering Dates:** May–September

**Reproduction:** Seeds and adventitious shoot buds

**Height:** 0.1–1 m (0.3–3.3 ft, usually 1–2 ft)

**Inflorescences:** Umbel of cyathia; each cyathium with 12–25 male flowers surrounding 1 female flower, subtended by 2 bracts; bracts heart-shaped (1–1.4 cm long), yellowish

**Flowers:** Greenish yellow (1.5–3 mm long), unisexual; female flowers divided into 3 cells

**Fruits:** Capsule (2.5–3.5 mm long), tuberculate, compartments 3; each compartment with 1 seed; honey-scented

**Seeds:** Ovoid to cylindric (2.2–3 mm long), gray to brown, smooth, mottled

**Leaves:** Alternate; blades simple, oblanceolate to linear-lanceolate (3–10 cm long, 3–11 mm wide), wider above the middle, drooping, margins entire; veins 1, prominent; surfaces without hair; contain a milky latex

**Stems:** Erect, branched below the inflorescence, without hair, contain a milky latex

**Underground:** Roots deep, woody, spreading, brown with numerous pinkish scaly adventitious shoot buds

**Where Found:** Northern and central Great Plains infesting irrigation ditch banks, roadsides, fields, open woodlands, shelter belts, disturbed sites, pastures, cemeteries, and especially subirrigated meadows. (NE, SD, ND, KS, MN, IA, MO, MT, WY, CO; Canada: Alberta, Saskatchewan and Manitoba)

**Uses and Values:** Leafy spurge is eaten by sheep and goats.

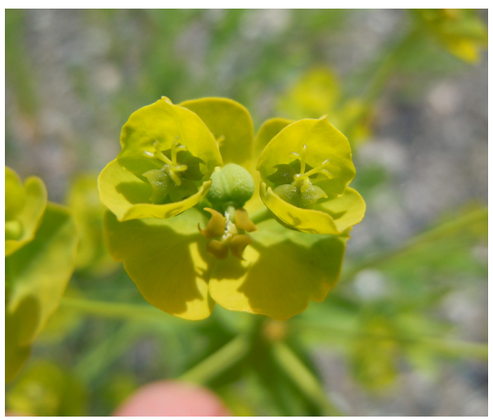
**Poisoning:** Snow on the mountain has a milky juice that contains phorbol esters that are caustic and cause severe skin irritation. Poisoning of livestock is rare because the bitter taste makes it relatively unpalatable. It will be eaten in hay and may produce scours and emaciation in cattle and can cause blistering and hair loss around horses' hooves.

**Other:** Leafy spurge is a noxious weed in many states. These plants aggressively and quickly spread and are difficult to control. Biological control with insects introduced from its native environment in Eurasia may provide some control assistance.

# IMPACT OF LEAFY SPURGE

Leafy spurge currently infests 185,000 acres in Nebraska. While pastures, rangeland, and right-of-ways tend to carry the largest infestation levels, other areas can equally provide habitat for this persistent, deep-rooted, invasive plant species. It can, and will, grow anywhere.

In 1923, a botanical survey found this plant in York County. Since that time, it has been confirmed in 82 counties in Nebraska. Landowners and producers spend millions of dollars each year to control leafy spurge. This plant competes for water and nutrients while depleting grass and forage, which is utilized by livestock, wildlife, and recreationists. We can all do our part by controlling leafy spurge infestations or by reporting uncontrolled infestations to your local county noxious weed control authority.



*Each cyathium is subtended by 2 yellowish heart-shaped bracts and can produce 3 seeds.*

# CONTROLLING LEAFY SPURGE

## Mechanical and Cultural Control

Infested areas that have been allowed to reach the bloom stage and are beginning to set seed pods can be mowed to temporarily prevent seed development. However, regrowth will begin immediately, and the infestation will require additional control measures. Leafy spurge does not usually cause great economic losses in cultivated row crops since the cultivation of those crops and the use of herbicides help to keep it suppressed. However, it will survive cultivation for many years and may even be spread throughout the field. Leafy spurge can cause serious problems in small grains as it may be at the seed production stage at the same time as the crop. The seed is nearly impossible to separate from small grains due to its size and weight. Cattle and horses will not feed on leafy spurge due to the toxic nature of the plant. However, goats and sheep will readily graze it. Properly managed grassland which is well fertilized and not overgrazed is the most efficient and profitable control method available today. However, these well-managed grasslands are not exempt from infestations and require continued monitoring to ensure noxious weeds are not allowed to grow.

## Biological Control

Natural enemies (biocontrol agents) for the control of leafy spurge have been used since 1988 in Nebraska. These agents work slowly, and results may not be seen for many years. These agents are considered as a tool to assist in the battle to help control leafy spurge and should never be relied on to completely control any noxious weed. The use of biocontrol agents shall be as effective as the use of herbicides and shall be approved by your local county noxious weed control authority.

## Leafy Spurge Control Summary

A combination of two or more control methods is the best approach to take when controlling leafy spurge. By utilizing several control options, your odds become greater that more leafy spurge will be controlled. Leafy spurge is capable of producing millions of seeds which may lie dormant for many years. Leafy spurge also spreads by means of its extensive underground root system. Existing patches can spread vegetatively up to four feet per year. Continued monitoring and follow-up control measures are essential for maintaining leafy spurge infestations at an acceptable level. Vigilance is necessary to identify new infestations and effectively control them when the patches are small and there is a possibility of total control. A follow-up program is necessary for several years to control missed plants and new seedlings.

## Herbicide Control

The use of herbicides can be an effective tool to assist in controlling noxious weeds. A person needs to identify the problem and the appropriate herbicide for the plant as well as the site that the plant is growing. If the noxious weed infestation is severe and scattered across a large area, then a broadcast application may be warranted. However, if the noxious weeds are in patches or a few scattered plants here and there, a person may be able to spot treat individual plants or patches. This approach requires less herbicide and has minimal impact on native plants and the environment. Controlling noxious weeds with herbicides in only one tool and should never be the only control option.

Additional information regarding herbicide use can be found through the Nebraska Cooperative Extension EC130 (*Guide for Weed, Disease, and Insect Management in Nebraska*) or your local county weed control Authority at **neweed.org**.