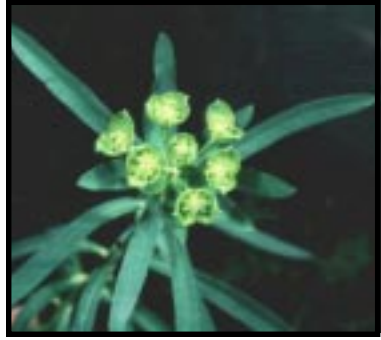


## Leafy spurge control recommendations

It is extremely difficult to achieve long-term control of leafy spurge. The most cost-effective control method depends on the size and location of the infested area. Small patches of leafy spurge can be permanently eliminated with a persistent



herbicide program. However, all areas will require continued control measures. This plant spreads by underground roots and there is always a fringe area of younger plants that do not bloom. There are also roots underground that extend beyond the younger plants. A 15-foot perimeter should be treated around leafy spurge patches to control seedlings and spreading roots. Treated patches should be watched carefully for at least eight years and any regrowth or seedlings should be aggressively retreated.

### Chemical control

The key to controlling leafy spurge is early detection and treatment of the initial invading plant. Because the weed is difficult to eradicate, a persistent management program is needed to control top growth and to gradually reduce the nutrient reserve in the root system. The most commonly used herbicides to control leafy spurge include Tordon 22K and 2,4-D. Plateau

has been granted a special labeling for use on pastureland and CRP as well as other non-ag situations. These herbicides are selective for broadleaf weed control and generally do not harm grasses when applied at recommended rates. Plateau DG is available as water-soluble eco-packets used for weed control in native grass and wildflower establishment and other non-crop areas.

Glyphosate (Roundup) is a nonselective herbicide that controls both grass and broadleaf weeds. **BEFORE USING ANY HERBICIDE, ALWAYS READ AND FOLLOW LABEL DIRECTIONS.**

### Timing herbicide applications

Herbicides should be applied to leafy spurge at the proper growth stage so optimum control can be achieved. Spring herbicide applications are most effective when applied about June 1 when the true flowers (not the yellow bracts) begin to appear on the leafy spurge plant. The optimum treatment time ends when the seeds begin to mature. Fall is also an excellent time to control leafy spurge. Fall regrowth will begin in leafy spurge in late August or September. During this time, carbohydrates are being transported to the roots for winter storage; herbicide translocation to the roots should also increase resulting in improved control.

### Small infestations

Plateau DG eco-paks are for the acreage owner or for smaller infestations. One eco-pak will cover two acres at a rate of 4 oz/acre. Roundup Pro as a spot treatment is also effective.

Plateau may be applied 12 oz/acre, fall only, or 8 oz/acre in the fall followed by 4 oz/acre in the spring.

### Cropland

Use only those broadleaf herbicides listed on the label for the intended crop(s).

### Pasture, range and cropland

Plateau is quite effective for controlling leafy spurge. It may be applied as one application in the fall at a rate of 12 oz/acre or a split application of 8 oz/acre in the fall, followed by a spring application at a rate of 4 oz/acre. At no time should you apply more than 12 ounces of Plateau in a one-year period. Tordon 22K is also effective for controlling leafy spurge. Treat with Tordon 22K at 1 qt/acre applied about June 1 or early September. However, this application rate may not be economically feasible if a large area is infested with leafy spurge. A more cost-effective option is a tank mix of Tordon 22K at 1-2 pts/acre plus 2,4-D at 1 qt of a 4#/gal concentration/acre applied about June 1 and repeated annually. Annual applications at these rates will gradually reduce leafy spurge infestations. Control of leafy spurge seeding can be achieved with 2,4-D 1qt of a 1#/gal concentrate/acre, but will not provide control of the roots. The most aggressive approach is to apply herbicides in both the spring and fall. Whatever control measures you choose, a consistent and thorough control plan should be implemented.

### Control among trees and in residential areas

Leafy spurge top growth in trees can be controlled by 2,4-D

## Weed Awareness



## Extent of noxious weeds in the county

Noxious weed acres in the county had been on a declining trend from 1993 to 1997. The sole reason for this decline was the result of the control efforts of both public and private landowners. However, 1998 and 1999 did not follow this trend. Moisture conditions these two years resulted in more noxious weeds germinating and made control more difficult. In the spring of 1999, the growing season started early with mild temperatures and good soil moisture. As a result, seeds dormant in the soil, as well as newly produced seeds, germinated to increase the total number of infested acres. The fall was very dry, reducing seed germination and reducing the effectiveness of herbicides. If the control efforts are not maintained, the infested acres will increase at a more rapid rate than the decline seen in previous years.

Where are the noxious weeds?

All land uses have significant infestations of noxious weeds. Approximately 12 percent of the pastureland acres are infested.

Non-ag land, which includes the City of Lincoln and rural lots, is second in the amount of noxious weed infestations. Cropland infestations are found mostly in alfalfa fields and idle cropland. The most visible infestations are on roadsides and railroads. Yet they have less than two percent of the total infested acres. There has been an aggressive control effort on these transportation corridors resulting in a sharp drop in the acres infested.

Infested acres by weed

Over four percent of the land area is infested with noxious weeds. Musk thistle makes up 94 percent of the noxious weed infested area. Musk thistle has been found in almost all the sections in the county. Leafy spurge does not cover a lot of acres, but it has been found on over 400 sites and in 1 out of 7 sections. Plumeless thistle and Canada thistle infest less than 500 acres. Diffuse knapweed has only been found on one site. Follow-up inspections of this site indicate that this infestation has been eradicated.

applied at the rate of 1qt/acre of a 4#/gal concentrate. Care must be taken to avoid contacting tree foliage with either the herbicide or spray drift to prevent tree injury. Roundup applied in the spring and fall will control top

growth and reduce roots. Apply to only active growing plants, taking special care not to get any chemical on other desired plants.

## Purple loosestrife a noxious weed?

The Nebraska Department of Agriculture held a public hearing December 15, 1999 on rules and regulations that would add purple loosestrife to



the state's noxious weed list beginning 2001. The director will be making a decision on this proposed addition. If the addition is made, an extensive awareness and education program is needed to inform

the public.

### Threat

The Congressional Research Service portrays purple loosestrife as one of the most harmful, non-native plants in its issue paper on invasive species. They quote a source saying this one plant currently contributes \$45 million in damages annually. This damage will increase rapidly if aggressive control actions are not taken. Purple loosestrife is on the Nature Conservancy's "America's Least Wanted" list. Twenty-two states and two provinces in Canada have already designated it a noxious weed. These states include five of our neighbors.

### Sterile seed issue

Purple loosestrife is naturally self-sterile and may not cross with the same cultivar. Cross-pollination is possible with other cultivars of a different flower type. Insects, including honeybees, are very effective pollinators of purple loosestrife plants even a long distance apart. Research in Minnesota and Canada found that all cultivars, including cultivars sold as sterile, will cross-pollinate and produce viable seed. This was

substantiated by seed collections made of horticultural plantings in Lincoln in 1995 and in Omaha in 1999. Seeds collected from all plants were highly viable. These seeds may or may not germinate in the flower garden, but the millions of very small seeds are readily carried by water to wetter locations more desirable for germination.

### Situation in Lancaster County

Some wild purple loosestrife plants were found around some of the Salt Valley Lakes in the early 90's. The Game and Parks Commission employees have been keeping these infestations contained. Lythrum has become a very popular planting around many homes in Lincoln. Escape plants are showing up in wet and low lying areas. Some of these areas include Holmes Lake, Pine Lake, a drainage north of Van Dorn, just west of South 84 Street and a drainage crossing South 40 Street across from Williamsburg.

### Why eliminate ornamen-

### tal lythrum plantings?

Seed from ornamental plants are easily spread by water through storm sewers as well as other man-made and natural drainage systems. Purple loosestrife also is spread from ornamental plantings into



aquatic areas by depositing lawn and/or garden clippings along creeks, drainage or even in public landfills. The above picture shows plants spread from landscape plantings in Lincoln. Clippings from these plantings may contain viable seed and/or plant parts from purple loosestrife. Wind, birds, insects and small animals also are responsible for dispersing seed originating from ornamental loos-

strife. Purple loosestrife is a designated noxious weed in neighboring states and may soon become a noxious weed in Nebraska.

### What can you do?

- If you have lythrum in your garden, please remove it.
- Dig out plants including all roots.
- Place in a dark garbage bag and take to landfill.
- DO NOT COMPOST.
- Use alternate perennials in your garden.
- Report any wild purple loosestrife plants to the Weed Control Authority.

### Alternative plantings

- Ornamental purple loosestrife can be replaced with:
- Blazing star (*Liatriis* spp.),
  - Fireweed (*Epilobium angustifolium*),
  - Obedient plant (*Physostegia virginiana*), or Spike speedwell (*Veronica spicata*).

For additional alternative plantings, contact the University of Nebraska Cooperative Extension Service at (402) 441-7180.