

Management of *Euphorbia esula*
(leafy spurge)



Lewis and Clark County Noxious
Weed Control District
3402 Cooney Dr Helena | MT 59602

Montana Priority 2B Noxious Weed

Plant Description

Euphorbia virgata, leafy spurge, is a long-lived perennial that grows 30-80 cm tall. The flowers are yellow green in color and inconspicuous, subtended by showy bracts. The long, narrow leaves alternate along the branched stems. When the plant is broken, a milky sap is present. Leafy spurge reproduces through seeds, adventitious buds, and rhizomes.

Mechanical Control

Hand removal may provide effective control for small infestations. Mowing may provide limited control. Mow plants repeatedly every 2-4 weeks throughout the growing season to reduce seed production. Wear protective gloves.

Biological Control

There are several biological control species available for leafy spurge. A minimum of a five acre infestation is ideal for best control. Biological control works best when a combination of multiple species is used.

Aphthona sp. is a genus of flea beetles that does better in less dense stands and dryer conditions.

Aphthona sp. are available through the following online retailers:

- Integrated Weed Control; (406)585-2789, www.integratedweedcontrol.com
- Weed Busters; (406)251-4261, robertkandace5@msn.com
- www.weedbustersbiocontrol.com
- Jeff Copeland; (406)539-6029, jouzelcopeland@gmail.com

Aphthona sp. are available through the Lewis and Clark County Noxious Weed Control Division:

- Call to request a release; (406)447-8372
- Collections typically occur in July

Obera erythrocephala, the red-headed leafy spurge stem boring beetle, does better in more dense stands and in areas where possible flooding might happen. It is also available through the Lewis and Clark County Noxious Weed Control Division and the above listed online retailers.

Spurgia esulae, the leafy spurge tip gall midge, is available for purchase through the online retailer:

- Integrated Weed Control; (406)585-2789, www.integratedweedcontrol.com

Cultural Control

Revegetation is important. Introduce desirable species, especially in areas with disturbance. Competing plants help prevent the invasion of new and existing unwanted vegetation. Controlled burns reduce aboveground biomass, but does not affect the root system, so plants will regrow.



Recommended Treatment Timeline

Control Type	Spring	Summer	Fall
Mechanical	Hand pull, bag and dispose	Hand pull, bag and dispose	Hand pull, bag and dispose
Biological	Contact Lewis and Clark County Noxious Weed Control Division		
Cultural	Revegetation	Revegetation	Revegetation
Chemical	Foliar spray		Foliar spray

Chemical Control

Follow the directions on herbicide labels, the label is the law. Calibrate equipment for accurate application. Commonly used herbicides are listed below, order of listing is not reflective of efficacy or recommendation.

Personal protective equipment must be worn when applying herbicides. Only apply herbicides in appropriate weather conditions.^a

Use appropriate surfactants as listed in the product label.^a

^aRead and follow all instructions in the label of the herbicide.

Chemical Control Table							
Use Site	Herbicide (Active Ingredient - Trademark)	Pre-emergent or Soil Residual Activity	Post-emergent (Foliar Applied)	Large Sprayer Rate per Acre	Spot Treatment Rate for Every 1 Gallon of Water	Restricted Entry Interval (Hours)	Application Notes and Environmental Advisories*
Turfgrass, Non-Cropland, Rangeland	2,4-D -Several products available	no	yes	1 - 6 qt (0.95 to 5.7 lb a.e/A)	Consult label	48	Apply when flowering in the early spring, or on fall regrowth. Groundwater and surface water advisories.
	2,4-D Amine, Dicamba, MCPA - Gordon's Trimec Broadleaf Herbicide ^b	no	yes	Consult label	Consult label	48	Do not broadcast apply when air temperatures exceed 90°F. Apply before the flowering stage to prevent seed production; best applied to young plants from the rosette to bolting stage. Toxic to fish and aquatic invertebrates. Groundwater and surface water advisories.
Forest	2,4-D amine - Several products available	no	yes	1 - 6 qt	Consult label	48	Apply in early spring when flowering or on fall regrowth. Groundwater and surface water advisory.
Ornamentals	Glyphosate - Roundup ProMax ^b	no	yes	1 - 2 pt (Roundup ProMax ^b)	2.5 oz (Roundup ProMax ^b)	4	Apply when plants are actively growing. Surface water advisory.

^bLewis and Clark County Noxious Weed Control Division does not endorse any trade names or commercial names listed above.

This table summarizes selected registered use sites and is not intended to represent all approved uses. Pesticide applicability, use sites, and restrictions vary by product and formulation. Applicators must consult and follow the most current product label, which takes precedence over this document.

References

- Bayer Cropscience. (2020). *Roundup ProMax*. U.S. Environmental Protection Agency Registration No. 524-579.
- Corteva Agriscience. (2025). *Tordon 22k*. U.S. Environmental Protection Agency Registration No. 62719-6.
- Ditomaso, J. M., Kyser, G. B., Oneto, S. R., Wilson, R. G., Orloff, S. B., Anderson, L. W., Wright, S. D., Roncoroni, J. A., Miller, T. L., Prather, T. S., Ransom, C. V., Kenneth George Beck, Duncan, C. A., Wilson, K. A., J Jeremiah Mann, Department, Davis., & Weed, Davis. (2013). *Weed control in natural areas in the Western United States*. University Of California Weed Research And Information Center. 62719-259.
- Leafy Spurge — *Euphorbia virgata*. Montana Field Guide. Montana Natural Heritage Program.
<https://FieldGuide.mt.gov/speciesDetail.aspx?elcode=PDEUP0Q0L2>
- PBI Gordon Corporation. *Gordon's Amine 400 2,4-D Weed Killer*. U.S. Environmental Protection Agency Registration No. 2217-2.
- PBI Gordon Corporation. *Trimec Classic Broadleaf Herbicide*. U.S. Environmental Protection Agency Registration No. 2217-543.

