

Leafy Spurge

Solutions



Leafy spurge (*Euphorbia esula*) is a troublesome, perennial weed that spreads rapidly once established, forming large, dense colonies of a monoculture which are difficult to control. This plant has invaded large areas of rangeland, farmland and roadsides in the Prairie provinces as well as being a problem in pastures, roadsides, uncultivated crops and reduced tillage crops in eastern provinces. Although found on heavier soils, leafy spurge thrives in coarse soils.

Leafy spurge plants over-winter by using its extensive perennial root system. This extensive root system produces new shoots from pinkish root buds each spring at depths of 30 cm or more. The root system spreads horizontally producing new crowns from pinkish adventitious root buds and vertically to depths up to 4.5 m. Perennial roots increase in size and diameter over time. Within large stands, crowns remain connected underground increasing plant reserves which makes mechanical and herbicide control less effective.

Some key characteristics to differentiate leafy spurge from other species:

- Leafy spurge stems are smooth, yellowish brown, mostly un-branched below the flowers. They grow in clumps from 30 to 70 cm tall which are interconnected by a perennial root.
- Leaves are linear, alternate and attached directly to the stem with no petiole. This is different than Cypress spurge leaves which are crowded on side stems. All plant parts have a milky sap.
- Leafy spurge has greenish-yellow flower clusters with leafy flower parts. They grow in flat topped clusters at the tops of the stem and on side shoots.
- The dried seed pods explode and spread seed up to 5 metres. Seed persists in the soil for 5 to 8 years.

Leafy spurge plants are unpalatable to cattle and horses and can have negative impacts on cattle. Its presence can render fields unsuitable for pasture. Interestingly, leafy spurge thrives in areas where vegetation is grazed out, taking over rangelands and pastures.



Leafy Spurge Treated/Untreated



Leafy Spurge Close Up

Leafy Spurge Solutions



The Solution

A multiple year control program is required to control the large underground roots and seeds. Control should include an integrated program using herbicides as a tool with other control methods.

Apply herbicides at the appropriate time when uptake is best:

- In late May and June once flowering has started to prevent seed production and herbicide will translocate to root
- In early September once growth has resumed and herbicide will translocate to root

The benefit of using herbicides with residual control is to prevent germination of seedlings through the year.

As part of a control program, establishment of competitive vegetation is important to prevent new infestations. Combine seeding and fertilization to promote competitive growth of desirable cover.

Cleaning equipment after herbicide application within a site, mowing, ditching or any work on infested sites is critical to prevent linear spread down rights-of-way or to new fields.

For cleaning protocols for contractors:

http://www.ontarioinvasiveplants.ca/files/CleanEquipmentProtocol_Mar152013_D3_FINAL.pdf

APPLICATION TYPE	SOLUTION	RATE	APPLICATION TIMING
Pre & Post-Emergent Bareground	Esplanade + Truvis or Navius	375 ml/ha + 168 g/ ha 167 g/ha	When weeds are actively growing
Post-Emergent Selective weeding	Navius or Truvis	167 g/ha 168 g/ha	Weeds actively growing- Mid May thru Mid September
Post-Emergent Selective Weeding Range and Pasture	Navius	167 g/ha	Weeds actively growing- Mid May thru Mid September (do not need to remove cattle from pasture)

For more information about effective vegetation management, contact your Bayer representative or visit BayerES.ca/VM

www.bayeres.ca/vm 1-888-283-6847

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