

## **Nova Scotia Noxious Weeds**

### **Leafy Spurge - *Euphorbia esula* L.**

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Leafy spurge has tough, woody stems that occur in erect clumps, often producing dense stands. The hairless stems grow to a height of one meter and have many alternately arranged stalkless leaves which are three to seven cm long. All parts of the plant exude a milky greenish sap when damaged.

The flowers of leafy spurge do not have petals or sepals. They are greenish yellow in colour, and are found in a hollowed-out cup-shaped structure (bracts) which holds several flowers. These occur in flat clusters at stem tips, or may be scattered along the stem. Flowering occurs mostly in June. The seed capsules (mid July to late fall) are three-celled, each cell having one seed. They are produced in an umbel form at the top of the stem.

Leafy spurge has horizontal and vertical roots. The vertical roots are very long and extend deeply into the soil, going to a depth of nine meters. These roots are very thick and have a corky bark covering on them, helping the plant survive drought conditions. The horizontal roots lack the bark-like covering but produce the shoot buds which spread this weed.



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Leafy spurge was introduced from Europe, most likely with oats brought over with early settlers. The plant is also known as leafy euphorbia, and wolf's milk.

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#### **Life Cycle**

Leafy spurge is perennial spreading by seed and rootstock. Seed capsules are formed in July to late fall. When these seed capsules break open, the seeds are hurled up to 5 m away from the parent plant. An individual shoot of leafy spurge can produce over 200 seeds.

More importantly, leafy spurge spreads by both vertical and horizontal underground roots which produce new shoot buds in the spring. Root fragments at a depth of 1 m in the soil are capable of producing a new plant.

## Habitat

Leafy spurge will thrive in a wide range of soil types and environmental conditions. It may be found in grain fields, meadows, pastures, abandoned fields, roadsides, and waste places. It will tolerate flooding for over four months as long as its shoots are growing above water level and it has full sunlight. Leafy spurge is very rare in Nova Scotia, but has been found in Pictou and Kings counties.



## Effects

The milky sap produced by leafy spurge will cause a severe skin rash in humans. This weed is also poisonous to most livestock, with the notable exception of sheep, which can be used to control it. If horses are permitted to walk in areas with leafy spurge, the sap will cause severe blistering and hair loss on their feet. It may also cause scours and weakness in cattle, but they normally avoid grazing it.

Extracts from the roots of leafy spurge are leached into the soil wherever the weed grows. These extracts inhibit the germination and growth of other plants in the surrounding area, thereby reducing crop yield.

## Control

Leafy spurge is difficult to control in cropland because of its creeping underground root system and is very well suited to sandy and marginal soils. Sheep will graze leafy spurge and can be used to eliminate top growth and slow the spread of the weed. The roots will still live for some time in spite of constant grazing.

Alternating intensive cultivation and cropping over five to seven years has been found to control this weed. Using herbicides to kill seedlings and regrowth will result in eradication over time. Recommended herbicides are 2,4-D, dicamba, or triclopyr. For further information or for application rates, consult your weed inspector or the most recent issue of the Guide to Weed Control (Publication 75).

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