



Canada Thistle

Cirsium arvense (aka Creeping thistle)



Photo credits: Nicolo Kimmel, Government of Alberta

Overview:

A colony-forming, aggressive perennial, that spreads primarily by its creeping root system. Despite its name, the plant was introduced from Europe, and is the only thistle, native or introduced, with separate male & female plants. Also called "Creeping Thistle," the roots spread both horizontally (up to 4.5 metres) and vertically (up to 6 metres) underground. It has been estimated that individual plants live about 2 years, but are continually replaced by new shoots from adventitious buds on its extensive root system. This can result in infestations composed entirely of genetically identical plants of one sex. Dense riparian infestations can impact wildlife by reducing food, and access & nesting cover for waterfowl.

Habitat:

Canada thistle thrives in a wide range of soil types but is not tolerant of waterlogged soil or complete shade. It does best in disturbed areas and overgrazed pasture/range. The extensive root system allows the plant to

survive periods of drought and access water & nutrient reserves far below the roots of native plants.

Identification:

Stems: Stems are grooved, upright, hollow and woody, branching near the top, and grow .5 m to 1.5 m tall.

Leaves: Leaves are lance-shaped, dark green, shiny on the surface and occur alternately, slightly clasping the stem. Lower leaves are largest and decrease in size upward along the stems. Leaf edges can vary from smooth with no spines to irregularly lobed with sharp spines.

Flowers: Flowers form at the ends of stems in clusters of one to several. The flower head is urn-shaped and the bracts are spineless. The colour of the flowers may vary from plant to plant, being purple, pink or white.

Seed: Seeds are borne in an achene 2 to 4 mm long which is tufted to aid in wind dispersal. Most seeds germinate within a year, but buried seed can stay dormant for up to 20 years.

Prevention:

The best preventive measure in non-crop-land is to maintain healthy plant cover and to reseed disturbed areas with a desirable species as soon as possible. Canada thistle seedlings are very shade intolerant and will not establish under low light conditions. Avoid overgrazing to prevent thistle establishment in pastures/rangeland.

Control:

Most of the biomass of Canada thistle plants is below ground; therefore killing the roots is the only effective control method. An integrated management plan that uses a variety control options is the most effective long term strategy for reducing infestations.

Grazing: Sheep and goats will readily graze thistle, but not so much in the spiny stage. Occasionally livestock will randomly graze thistle, even when other forage is available, however removal of the stems by grazing only stimulates re-sprouting by the plant. Invasive plants should never be considered as forage.

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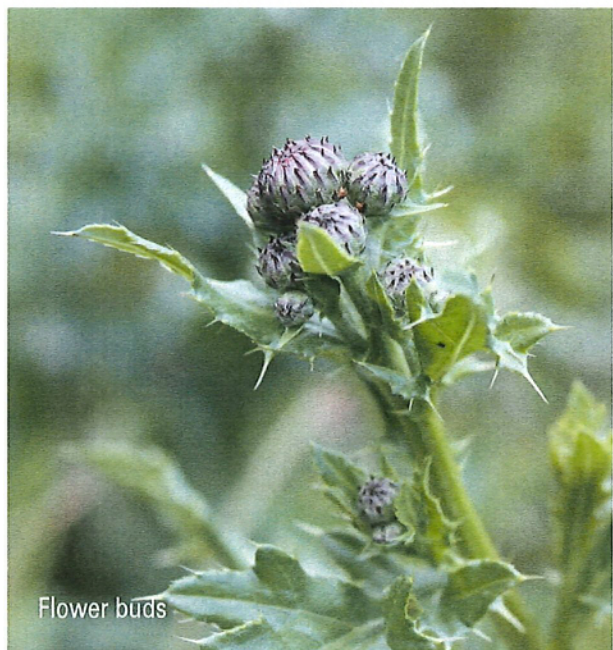
Canada Thistle (Continued)

Cultivation: Cultivation only produces small root pieces that rapidly develop into new plants, and does not reach the deeper roots.

Mechanical: Repeated mowing through the growing season gradually depletes the food energy stored in the root system. Repeated hand pulling in loose soils can also effectively stress the root system. To succeed, several years of effort must be committed.

Chemical: 2,4-D, Aminopyralid, Chlorsulfuron, Clopyralid, Dicamba, Glyphosate Hexazinone, Metsulfuron-methyl, MCPA and Picloram are some of the herbicides registered for use on Canada thistle. Always check product labels to ensure the herbicide is registered for use on the target plant in Canada by the Pest Management Regulatory Agency. Always read and follow label directions. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

Biological: Several weevils and one fly have been imported to target Canada and other thistle species, but a few are no longer recommended due to impacts on native thistle species.





Common Burdock

Arctium minus (Aka Lesser burdock)



Overview:

An introduced biennial that forms a rosette of leaves the first year, and large, stout flowering bolt with many branches the second year. It prefers areas with moist fertile soils – riparian areas – and recent soil disturbance. Its prickly seed heads are designed for dispersal, readily attaching to whatever animal may brush past (Burdock was the inspiration for the invention of Velcro by George de Mestral in the early 1940's). Common Burdock produces burrs which can entangle in the manes and tails of horses and the wool of sheep and can damage and de-value the wool of sheep. Several instances have been documented where birds and bats have become entangled in the burrs and died.

Habitat:

Common burdock is found in places where the soil is not disturbed; therefore, it is not commonly found in cultivated areas. This is due to the fact that it is a biennial, so it needs areas that are not severely disturbed on an annual basis. Such areas include: farmlands,

pastures, waste places, open or disturbed woods, road sides, fence rows, barnyards, abandoned fields, and stream banks. It is found both on moist fertile soils, many with high soil nitrogen content, and on sterile clay soils. Not many other plants will be found growing around large burdock patches – most likely due to the large leaves that reduce light at ground level.

Identification:

Stems: Are erect, coarse, branched and thick, have a reddish tinge and may be grooved or angular. Mature plants grow 1 to 3 m tall.

Leaves: Rosette leaves are large, hairy, and heart-shaped and readily shade out smaller plants. Stem leaves alternate and are broadest at the stalk. Leaf edges are wavy or toothed. Leaves are woolly on their undersides, and dark green above.

Flowers: Are purple and borne in short stalked clusters along the stems. Spiny, hooked bracts surround the florets.

Seeds: Seed production starts in July and

continues into the fall. Seeds are shed continuously throughout the fall, winter and following spring. A mature plant can produce from 6,000 to 16,000 seeds.

Prevention:

Avoid soil disturbance, re-seed bare soil where possible, encourage desirable, competing vegetation, and don't let existing infestations produce seed. Preventing the production of the burred seed is a key way to prevent spread. Clean burrs off clothing and animals.

Control:

Grazing: Livestock find burdock palatable, however infestations in riparian areas will suffer damage due to trampling.

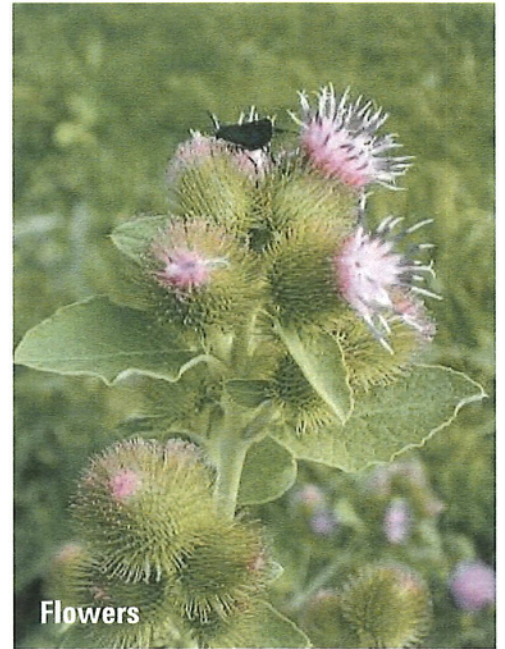
Cultivation: Tillage will kill plants in the rosette stage – burdock is intolerant of cultivation. Mowing or cutting can eliminate seed production and should be done after the plant has bolted, but before flowering.

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Common Burdock (Continued)

Chemical: 2,4-D, Aminopyralid in product combination with 2,4-D, Dicamba in tank mix with 2,4-D or MCPA, Dichlorprop, Hexazinone, Imazapyr, Linuron, MCPA, Picloram in product combination with 2,4-D, and Triclopyr are registered for use on common burdock. Always check product labels to ensure the herbicide is registered for use on the target plant in Canada by the Pest Management Regulatory Agency. Always read and follow label directions. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

Biological: Currently, there are no official forms of biological control for Common Burdock. However, there has been repeated interest from various provinces in researching biological control options. There are 13 insect species which attack Common Burdock. Only one of these insects, the Burdock moth (*Metzneria lap-pella*), has been reported in North America. This insect greatly reduces the number of viable seeds in the plant.



Flowers

