



Agricultural Service Board



Weed Control in Athabasca County

What is a Weed?

A plant considered undesirable, unattractive, or troublesome, especially in an area where it is not wanted.

Weed Classes

Prohibited Noxious—Pose a serious threat and must be eradicated. These weeds spread rapidly and are highly competitive. Weeds in this category are restricted to prevent establishment in Alberta.

Noxious—Have the ability to spread rapidly, cause severe crop losses and economic hardship. These weeds must be controlled to prevent further establishment and spread.

Importance of Controlling Weeds

Weeds create many problems for farmers, landowners and the ecosystem. They can:

- * Cause a decrease in agriculture production by reducing crop yield and quality
- * Serve as a host for diseases and insects
- * Cause toxicity problems in humans and livestock
- * Be inedible for livestock and wildlife
- * Compete with native vegetation for light, water and nutrients
- * Become an eyesore
- * Create visibility issues in transportation corridors
- * Be a fire hazard

Controlling Weeds on Your Property

Some actions that can be taken to reduce or prevent weed establishment include:

- * Mowing
- * Planting competitive “non-weed” Species
- * Hand pulling
- * Use of tillage practices
- * Not overgrazing pastures
- * Use of fertilizers so crops or grass can compete
- * Avoid planting wildflower seed mixes or seed that is not certified

Weed Control Act

Athabasca County has the ability to issue a weed notice under the Provincial *Weed Control Act*, directing landowners or occupants to control weeds on their property. If a notice is disregarded, then Athabasca County may enforce the notice at the expense of the landowner.

Under the Act:

An occupant of land, or if the land is unoccupied, the owner of the land, shall as often as is necessary:

- * **Destroy** all **prohibited noxious** weeds located on the land to prevent the spread, growth, ripening or scattering of the prohibited noxious weeds.
- * **Control** in accordance with this Act and the regulations all **noxious weeds** located on the land to prevent the spread, growth, ripening or scattering of the noxious weeds

Prohibited Noxious Weeds

Autumn Olive	Himalayan Balsam	Common Barberry
Red Bartsia	Common Buckthorn	Sulphur Cinquefoil
Common Crupina	Dyer's Woad	Eurasian Water Milfoil
Flowering Rush	Garlic Mustard	Goatgrass, Jointed
Meadow Hawkweed	Mouse-ear Hawkweed	Orange Hawkweed
Hoary Alyssum	Giant Hogweed	Pale Yellow Iris
Bighead Knapweed	Black Knapweed	Brown Knapweed
Diffuse Knapweed	Hybrid Knapweed	Meadow Knapweed
Russian Knapweed	Spotted Knapweed	Squarrose Knapweed
Tyrol Knapweed	Giant Knotweed	Hybrid Japanese Knotweed
Japanese Knotweed	Purple Loosestrife	Medusahead
Yellow Nutsedge	Puncturevine	Ragwort Tansy
Rush Skeltonweed	Saltcedar	Saltlover
St. John's-wort, Common	Yellow Starthistle	Tamarisk, Chinese
Smallflower Tamarisk	MarshThistle	Nodding Thistle
Plumeless Thistle		

Bold indicates they have been found in Athabasca County

Start looking for weeds in the spring; this will give you more options for control.

Noxious Weeds

Common Baby's-Breath

Field Bindweed

Downy Brome

Great Burdock

Woolly Burdock

Scentless Chamomile

White Cockle

Dame's Rocket

Globe-Podded Hoary Cress

Lens-Podded Hoary Cress

Common Mullein

Field Scabious

Leafy Spurge

Canada Thistle

Common Toadflax

Creeping Bellflower

Blueweed

Japanese Brome

Lesser Burdock

Tall Buttercup

Yellow Clematis

Oxeye Daisy

Black Henbane

Heart-Podded Hoary Cress

Hound's Tongue

Broad-Leaved Pepper-Grass

Perennial Sow Thistle

Common Tansy

Dalmation Toadflax

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Prohibited Noxious Weeds

The following pages give a short description of the Prohibited Noxious Weeds that have been found in Athabasca County as well as some that are suspected to be within the County. Check with your Agricultural Fieldman or chemical supplier for control measures and more information.

Orange Hawkweed



Plant: Thought to have been introduced as an ornamental plant, Orange Hawkweed is a perennial that produces from seed and stolons (much like a strawberry). The plant is very hairy with leaves mostly occurring at the base of the plant. The stem contains a milky sap and is usually leafless.

Flowers: Orange Hawkweed flowers are hard to miss. Bright orange with a lighter centre, the petals are square at the edges and toothed. One flower will produce 10-25 seeds and between 5 and 30 flower heads are typically found on one plant. Released seeds will remain viable in the soil for as long as seven years.

Where to Find This Weed: This plant can grow in a wide variety of environments but prefers well-drained soils. The many adaptations of Orange Hawkweed make it a plant of great concern.

Sulphur Cinquefoil



Plant: Upright stems with branching towards the top. Leaves of the plant are yellowy-green in colour and alternate along the stem but few leaves grow at the bottom. Tiny hairs cover the entire plant, except the flowers. Typical height is 30-70 cm.

Flowers: The flower of sulphur cinquefoil is a pale yellow with a darker yellow centre. Petals are distinctly heart-shaped.

Where to Find This Weed: Sulphur Cinquefoil prefers drier areas and full sun. It does not tolerate shade well but will grow in a wide variety of soil conditions.

Purple Loosestrife



Plant: An escaped ornamental, Purple Loosestrife is still commonly found in flower gardens. This plant chokes off riparian areas and lakes with the dense, mat-like roots it forms and is capable of producing over one million seeds. The stem is square-ish and the leaves are opposite, occurring up the stem of the plant.

Flowers: Flowers of this plant are purple to light pink and have a papery texture. They occur in a spike at the top of the stem and have 5-7 petals.

Where to Find This Weed: Purple Loosestrife prefers moist to wet soils that have high organic content that are neutral to alkaline. It can be found in marshes, along rivers, ponds and lakes.

Himalayan Balsam



Plant: Also called Poor Man's Orchid and Policeman's Helmet, this plant was introduced as an ornamental. Growing between 1-3m in height, the stems are hairless and leaves are serrated. Stems are hollow and have a purple tinge to them. Himalayan Balsam is an annual plant which only produces by seed.

Flowers: This flower is large and purple to pink in colour. The flowers occur in clusters of four or five. 700-800 seeds per medium plant are explosively released from seed pods when disturbed and can be flung as far as five metres from the parent plant. These seeds are viable underwater two years after release and even when completely soaked.

Where to Find This Weed: This plant prefers very moist soils and is frequently seen around rivers, lakes, ponds and marshes. The root system is very shallow which can lead to bank erosion, lowering the water quality of the nearby water body.



Noxious Weeds

The following list offers information on noxious weeds found within Athabasca County. Noxious weeds must be controlled by landowners. Contact your Chemical Supplier or Athabasca County Agricultural Service for information on control measures.

White Cockle



Plant: Erect, biennial or short-lived perennial plant with hairy green leaves. Frequently grows in clumps. Flowers are fragrant and the hair on the leaves helps distinguish this plant from night-flowering catchfly and bladder campion. Catchfly has a sticky feel to the stalk and bladder campion has no hair on the stem. This plant has male and female plants. Rosettes form in the first season of growth, overwinter and produce flowers in the next season. White Cockle is capable of producing 20,000 seeds per female plant. This plant is a frequent contaminant of commercial seed or hay.

Flowers: Flowers are white with five deeply notched petals and fragrant. They extend from a hairy tubular calyx or pouch. Male plants have ten stripes on this pouch while female (seed bearing) plants have twenty.

Where to Find This Weed: Disturbed areas, fields, meadows, roadsides, waste areas. White Cockle is a problem for hay fields and pastures especially. The plant prefers full sun and dry, rich, well-drained soils.



Woolly Burdock



Plant: Tall, stiff plant that can grow from 1-3m in height. This large plant is a biennial, forming a large rosette in its first season of growth, followed by many branched flowering stalks in the second year. Woolly appearance at the base of the plant and on flower heads is what distinguishes this plant from other types of burdock. Leaves are extremely large and shade other plants in the area.

Flowers: Spiny seed head with thin purple to pinkish tube-like flowers. When mature, seed heads will stick to clothing, in animal fur and can de-value the wool of sheep. Velcro was developed partially by mimicking burdock's sticky habit.

Where to Find This Weed: Woolly Burdock will colonize recently cultivated fields but will not be found in frequently cultivated cropland. Waste areas, headlands, riparian areas and roadsides are common infestation sites.

NOTE: This is a recently discovered weed for Athabasca County.



Tall Buttercup



Plant: Tall Buttercup is a slender plant, bolting out of a clump of leaves towards the ground. It forms many branches which each have a flower at the end. The leaves of this plant are deeply lobed and finely divided. There are some leaves along the stem, but they are not numerous.

Flowers: Flowers of Tall Buttercup are bright yellow with five petals. The seeds formed by the flowers are black and can stick to the hair of animals, or clothing.

Where to Find This Weed: This plant thrives in wet areas but can succeed in drier area when there is enough moisture. In wet years, there is an abundance of tall buttercup but in drier years, there will be less. Tall Buttercup can be a problem in pastures, along roadsides, in wet areas like marshes or ponds and in hay fields.



Oxeye Daisy



Plant: This plant is often confused with scentless chamomile and for easier identification, look at the leaves. The leaves of Ox-Eye Daisy are spoon shaped while chamomile leaves are finely divided. Most of the leaves occur at the bottom of the plant, with singular leaves alternating up the stem. The stem has a single flower at the top and there are no branches.

Flowers: Ox-Eye Daisy is a white daisy flower. There is a yellow centre and white petals. While many people find this plant attractive and confuse it for Shasta Daisy, there are no naturally occurring white daisies in Alberta.

Where to Find This Weed: This plant prefers full to partial sun and well drained soils. Ox-Eye Daisy does not tolerate frequent cultivation well and will typically be seen in pastures, along roadsides, in ditches, waste areas and headlands.



Scentless Chamomile



Plant: The flower stems come from a rosette low to the ground. The stem of the plant is often reddish-purple and branched at the top, giving the Scentless Chamomile a bushy appearance. Leaves are fine and resemble dill weed. When crushed, the leaves of this plant produce no smell. This plant reproduces from seed.

Flowers: Flowers of Scentless Chamomile are daisy-like and singular at the end of stem branches. When crushed there is no smell. When the plant is going to seed, the petals of the flower will point downwards and the flower will resemble a badminton birdie. Scentless Chamomile is capable of producing 10,000 to 400,000 seeds per plant.

Where to Find This Weed: Found in disturbed areas, fields, meadows, roadsides, waste areas. Scentless Chamomile can tolerate a wide range of environmental conditions, including germinating in periodically flooded areas



Perennial Sow Thistle



Plant: Distinguishing between annual sow thistle and perennial sow thistle can be very difficult. The key identifier is the root. Perennial sow thistle has a creeping root while annual sow thistle has a tap root. Annual sow-thistle also has smaller flowers and stronger spines along the leaves. Perennial sow thistle is also distinguished by its clasping stem leaves. Most of the leaves of this plant occur towards the bottom and the teeth along them point downward.

Flowers: The flowers of perennial sow thistle are larger than most of the numerous yellow flowers you are likely to see. They occur in a small cluster at the top of the plant, with notable hairs found on the bud of un-bloomed flowers.



Where to Find This Weed: Perennial Sow-thistle is a common site in ditches, in cropped fields, in waste areas, and headlands. This weed can become a problem in riparian areas. Perennial Sow Thistle will release a chemical that makes it difficult for other plants to grow.

Common Tansy



Plant: Tansy is a perennial plant with dark green, divided leaves and yellow flowers. Red striping is commonly on the stem and the plant grows up-right, forming dense stands with its creeping roots. Tansy also spreads by seed but needs a period of -20c for the seeds to germinate in spring.

Flowers: Flowering in late June- early July, Common Tansy has flat topped flowers that resemble buttons and are yellow in colour. These flowers occur in dense clusters at the top of the stem. The plant can produce over 50,000 seeds per plant that can survive in the seed bank of the soil for a number of years.

Where to Find This Weed: This plant prefers sunny, well-drained areas and is commonly found on stream banks, roadsides, disturbed lands, and ringing frequently cultivated fields. In hay land and pastures, it can reduce productivity with its creeping roots. It is unpalatable to livestock and grazing is not an effective means of control. Clipping the flower heads in the fall will control seed production but clippings should be burned.



Field Scabious



Plant: Another ornamental plant introduction, Field Scabious originally hails from Europe. This tall perennial prefers grassy areas and forms a deep taproot. Stems of the plant are erect, hairy and can grow up to 1.5 m in height. The leaves of Field Scabious are deeply lobed and hairy, occurring primarily at the base of the plant. There is little branching along the tall stem.

Flowers: Flowers of this plant are white to bluish-purple and occur at the top of the stem. The large flower is capable of producing more than two thousand seeds per flower head. These seeds then fall from the plant and can remain viable in the soil for many years.

Where to Find This Weed: Field Scabious prefers nutrient-rich, moderately dry sites but can establish itself in gravelly soils as well. Field Scabious prefers undisturbed sites and can invade already established and desirable vegetation. Once established, it outcompetes this vegetation and can be difficult to control without also harming the natural flora of the area.



Canada Thistle



Plant: This plant is a perennial that can grow up to 1.2 m (4 feet) tall. Often, Canada Thistle occurs in clumps formed from the deep, spreading roots. During the first year of growth, the plant forms a non-flowering rosette, overwinters and continues its life cycle in the following year. Canada Thistle is a common contaminant of crop seed. It was originally introduced from southeastern Eurasia.

Flowers: Canada Thistle has pinkish-purple flowers that occur in clusters. The plant has male and female flowers occurring on the same plant, meaning every plant is capable of producing seeds. These flowers are capable of producing over 40,000 seeds and these seeds remain viable in the soil for up to twenty one years.

Where to Find This Weed: Canada Thistle prefers moist soil and does not tolerate heavy shade. The plant can be found in disturbed sites, roadsides, pastures and stream banks. It is a difficult weed to control if left to its own devices.



Common Toadflax



Plant: Toadflax is a rhizomatous perennial that can reach 1m (three feet) in height. It was introduced from Eurasia in the mid 1800's as an ornamental plant. Leaves are long and thin, occurring in a whorl up the stem of the plant. Seedlings can be mistaken for leafy spurge but Toadflax does not have a milky juice when the stem is broken. Sometimes called butter and eggs or wild snapdragon, it is a difficult weed to control once established.



Flowers: Yellow Toadflax has an attractive flower. Bright yellow with a deep orange throat, it is easy to see why it was a desirable flower in gardens. Seeds resulting from the flower are black and flattened. They can persist in the soil for eight years.

Where to Find This Weed: This plant prefers moist, rich soils and is an aggressive competitor in grasslands or burned areas. Toadflax can be found in disturbed or cultivated areas, along roadsides, in pastures, forest clearings and grasslands

Leafy Spurge



Plant: Tansy is a perennial plant with dark green, divided leaves and yellow flowers. Red striping is commonly on the stem and the plant grows up-right, forming dense stands with its creeping roots. Tansy also spreads by seed but needs a period of -20c for the seeds to germinate in spring.

Flowers: Flowering in late June- early July, Common Tansy has flat topped flowers that resemble buttons and are yellow in colour. These flowers occur in dense clusters at the top of the stem. The plant can produce over 50,000 seeds per plant that can survive in the seed bank of the soil for a number of years.



Where to Find This Weed: This plant prefers sunny, well-drained areas and is commonly found on stream banks, roadsides, disturbed lands, and ringing frequently cultivated fields. In hay land and pastures, it can reduce productivity with its creeping roots. It is unpalatable to livestock and grazing is not an effective means of control. Clipping the flower heads in the fall will control seed production but clippings should be burned.



Athabasca County

Rental Equipment, No Spray Agreements

Athabasca County has various pieces of equipment available for rent to assist ratepayers in controlling weed infestations. There is a 300 gallon field sprayer, handheld canister sprayers and a 150 gallon truck slip-in sprayer. Contact Athabasca County Agricultural Services for further information and availability.

There is an active Vegetation Control Agreement available for residents willing to control the vegetation adjacent to their land. Those interested should call Athabasca County Agricultural Services for the particulars of the agreement.

Agricultural Services Department

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Weed photos are courtesy of the Alberta Invasive Plant Council
<http://www.invasiveplants.ab.ca/>