

Invasive Plants

Invasive plant species are those that have been either intentionally or accidentally introduced outside of their natural habitat and out-compete native species for space, nutrients and water. According to the World Conservation Union, after habitat loss, invasive species are the second most significant threat to biodiversity. Invasive plants are a threat to native species because they have few natural controls in their new environment. As a result, rangelands are altered and suffer a decrease in biodiversity, forage production and wildlife habitat.

The most significant *non-agricultural* invasive plant species (weeds) impacting Alberta are:

Current:

- Canada Thistle (noxious)
- Common Tansy (noxious)
- Scentless Chamomile (noxious)
- Tall Buttercup (noxious)
- Ox-eye Daisy (noxious)
- Leafy Spurge (noxious)
- Downy Brome (nuisance)

Potential to become significant:

- Salt Cedar
- Yellow Star Thistle (restricted)
- Garlic Mustard
- Common Crupina

The most significant *escaped agricultural* invasive plant species impacting Alberta are:

- Smooth Brome
- Kentucky Bluegrass
- Timothy
- Crested Wheatgrass
- White Clover



Yellow Star Thistle

Native grasses are more drought tolerant, require less maintenance and can be grazed later in the season than tame grasses.

Avoid seeding invasive agricultural species near native grasslands.

The following invasive species are known to be **toxic to livestock**:

- **Common Tansy**: Toxic to animals. Unpalatable to cattle and horses, but sheep and goats may graze it.
- **Tall Buttercup**: Its fluids can cause blisters, pain and inflammation in livestock.
- **Yellow Star Thistle**: Causes a nervous disorder called "chewing disease" in horses which often ends in death. Palatable in early stages to sheep, goats and cattle. Goats will also eat it in the spiny stage.
- **Leafy Spurge**: Poisonous to livestock and is an irritant to human skin. Palatable to sheep and goats (unaffected by the toxins).
- **Hound's tongue**: Toxic and can cause liver damage in cattle and horses. Sheep seem to be less affected. Unpalatable.
- **Black Henbane**: Toxic to animals and humans. Unpalatable.
- **Dalmatian Toadflax**: Toxic. Unpalatable.
- **Stork's Bill**: Poisonous to livestock.
- **Russian Knapweed**: May cause "chewing disease" in horses which may result in death. Unpalatable.

PREVENTION: The first and most important step

- Learn how to identify invasive plants.
- Don't grow invasive plants in your garden.
- Avoid contact with plants and clean shoes, clothing, pets and vehicles if you do come into contact with them.
- Use certified weed free forage and seed mixes.
- Tackle small infestations when first noticed to avoid a larger problem down the road.



Ken Pitcher

Hawkmoth used for biological control of leafy spurge.

The Weed Control Act

Invasive plants are classed under the Weed Control Act as restricted, noxious or nuisance. Rankings in your county may be slightly different because counties have the ability to upgrade a species ranking if it is especially problematic in that county. Downlisting is not allowed.

Restricted Weeds

- Usually present in low numbers.
- Only established at a few spots in Alberta.
- Listing is meant to prevent their establishment.
- Destruction is required anywhere they are found, according to the Weed Control Act.
- Often hand pulling is the only effective method of destruction.

Noxious Weeds

- Established in many areas of Alberta.
- Control is required anywhere they are found to be problematic, according to the Weed Control Act.

Nuisance Weeds

- Established throughout Alberta.
- Very difficult to eliminate, management not eradication is often the goal.

HOW YOU CAN GET INVOLVED



www.invasiveplants.ab.ca

- Factsheets for specific invaders, including control methods.
- 4 working groups: Profile, Education and Awareness, Collaboration and Expert Advice.
- Information on invasive ornamentals to avoid in your garden.
- The Invader, quarterly newsletter available on website.

Blueweed Blitz

Pull blueweed from the banks of Pincher Creek while making friends and enjoying a BBQ!

The Pincher Creek Watershed Group holds a one day weed pulling event every year along the banks of Pincher Creek. Over 15 tons of blueweed has been removed!

Call Brad at 403-627-3714 to help out.

Knapweed Rodeo

Fight spotted knapweed in the Waterton area with Nature Conservancy Canada and local landowners! This one day event held in July includes a BBQ in one of the most beautiful spots in Alberta.

Contact Nature Conservancy Canada at 403-444-3547 or 1-877-262-1253 ext. 3547.

Control methods for select species:

Canada Thistle

Grazing: Goats and sheep may graze in early stages, but grazing encourages re-sprouting.

Mechanical: Repeated mowing and hand pulling will stress the root system. May take several years.

Chemical: Herbicides applied in late fall are most effective.

Biological: A stem weevil (*Ceutorhynchus litura*) and gall fly (*Urophora carduii*) have been tried.

Areas prone to invasion: Prefers disturbed sites and overgrazed pastures.

Common Tansy

Grazing: Toxic and unpalatable to most grazers.

Mechanical: Repeated mowing to eliminate re-growth from root.

Chemical: Herbicides are effective, but best method is a combination of herbicide application and mowing.

Biological: None to date but research is ongoing.

Areas prone to invasion: Prefers fertile, well drained soils.

Scentless Chamomile

Grazing: Unpalatable.

Mechanical: Hand pulling small patches is effective. Mowing early in season (before flowering) and each successive mowing should be lower than the previous one.

Chemical: Herbicide application before seeding can be effective. A combination of mowing or hand pulling and herbicide application, before the plant goes to seed, is the best method.

Biological: a seed feeding weevil (*Omphalapion hookeri*) and a gall midge (*Rhopalomyia tripleurospermi*) have been tried at some locations in Alberta.

Areas prone to invasion: Areas of poor growth or overgrazing.

Interesting fact: A single plant can produce as many as a million seeds.

Tall Buttercup

Grazing: Unpalatable and irritable to grazers. Its juices can cause blisters and irritation.

Mechanical: Hand pulling for some infestations and mowing prior to flowering to prevent seed dispersal. Will not persist under cultivation.

Chemical: Many available for both range and crops.

Biological: None.

Areas prone to invasion: Prefers wet areas.

Ox-eye Daisy

Grazing: Unpalatable.

Mechanical: Mowing before plants go to seed may be useful, but may encourage re-sprouting. Hand-pulling prior to flowering is effective, but may need to be repeated over a period of years.

Chemical: Apply to actively growing plants until flowering stage. Glyphosate, 2,4-D, dicamba can be used. Picloram on some soil types.

Biological: None.

Areas prone to invasion: Tolerates a wide range of conditions, but flourishes in soil low in nutrients.



Maria Didkowsky

Common Tansy



Andrew Stiles

Scentless Chamomile



Andrew Stiles

Tall Buttercup



Andrew Stiles

Ox-eye Daisy

Control methods for select species:

Leafy Spurge

Grazing: Palatable to sheep and goats (who are unaffected by its toxins). Grazing by sheep and goats can cause re-sprouting which can result in a reduction in root reserves.

Mechanical: Small, young infestations can be mowed or handpulled. Ineffective once established.

Chemical: Herbicides applied during the growth stage can be effective.

Areas prone to invasion: Tolerates a wide range of soil and moisture conditions.



Andrew Stiles

Leafy Spurge

Crested Wheatgrass

Grazing: Should be grazed mid-season as this will interrupt growth and prevent it from going to seed.

Mechanical: Should be mowed mid-season and to a height of 5cm or lower.

Chemical: Herbicides can be applied by wiper or sprayer and should be applied to the plant just before going to seed.

Areas prone to invasion: Disturbed and overgrazed areas.

Smooth Brome

Grazing: Palatable to livestock. Small patches should be grazed early in the growing season, allowed to rest of several weeks, and then grazed again. Larger patches should be grazed just before seed production and should only be grazed once a year.

Mechanical: Mowing while the plant is still in the boot stage is the best time to cut smooth brome. Repeating this over a period of several years will also help reduce smooth brome in the seed bank.

Chemical: Herbicides may be used by wiping (applicator comes in contact with plant).

Areas prone to invasion: Disturbed areas. Areas with abundant moisture are most at risk.



Kristen Rumbolt

Crested Wheatgrass

Resources

If you have a weed problem or would like more information:

- Call your county or municipal district office and talk to your local Agricultural Fieldman
- Call the Agricultural Service Board at 780-427-4213

Visit these websites:

- [www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/faq8261](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/faq8261)
- www.invasiveplants.ab.ca/
- www.anpc.ab.ca/wiki/index.php/Main_Page

Contact:

MULTISAR

2nd Floor, YPM Place, 530 - 8th Street S
Lethbridge, Alberta, T1J 2J8

www.multisar.ca

Fish and Wildlife Division - Program Coordinator
403-381-5318

Alberta Conservation Association Biologist
403-382-4364

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