

# What's in your Hay?

## Best Practices for Hay & Forage Producers

### Why are invasive species a problem for agricultural producers?

Invasive species are a serious concern for the Cariboo region, and a changing climate may increase their spread. Invasive plants outcompete forage and food crops, reducing crop yield and quality. Climate change, irrigation and the introduction of new crops such as industrial hemp may increase the risk of invasive plants in hay and forage fields. Some invasive plants host crop diseases and some may also be toxic to animals.

### What are the risks of having invasive plants in your hay and forage?

- » Decreased water quality: Invasive plants can impact soil by impeding the growth of desirable species, which can increase soil erosion and reduce water quality through increased sedimentation.
- » Productivity: Decreased productivity, yield, and profits of hay and other forage crops.
- » Profitability: The presence of invasive plants can limit access to markets due to the potential spread of invasive species to other areas and the reduction of crop quality, making the hay and forage unsuitable for high value markets (e.g. dairy and equestrian operations).
- » Animal health: Some invasive plants such as hoary alyssum and leafy spurge are toxic to livestock, and if consumed in forage or hay can lead to health disorders or death.
- » Some invasive plants decrease the quality of milk when eaten by dairy cattle by tainting it.



### Invasive Plants in Hay and Forage

**Canada thistle:** Can crowd out forage grasses in pastures and rangelands, reducing yields and productivity.



R. Mueller



L. Scott



J. Leekie

If you have noxious weeds on your property, you have a duty to control them under the BC Weed Control Act. Provincial and regional noxious weed lists are online at: [https://www.bclaws.ca/civix/document/id/complete/statreg/10\\_66\\_85#ScheduleA](https://www.bclaws.ca/civix/document/id/complete/statreg/10_66_85#ScheduleA)



**Cheatgrass:** Seed heads can irritate and puncture mouth tissues of grazing animals and wildlife. Awns may also become lodged in the paws and ears of wildlife, livestock and pets, often causing infection.



**Field bindweed:** Its twisting growth habit interferes with harvesting procedures by getting stuck in machinery.



**Common tansy:** Unpalatable to livestock, toxic if consumed in large quantities.



**Hawkweed species:** Dense mats displace forage plants in hay fields and pastures, causing a reduction in crop yields and increased management costs.



**Hoary alyssum:** Toxic to horses, causes laminitis if consumed in large quantities.





**Knapweed species:** Chokes out desirable forage for livestock and wildlife and increases soil erosion.



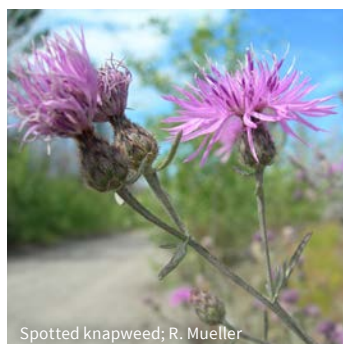
Brown knapweed; R. Mueller



Diffuse knapweed; R. Mueller



Russian knapweed; R. Mueller



Spotted knapweed; R. Mueller

**Leafy spurge:** Plant contains white, milky latex that can irritate the skin of livestock and humans, resulting in blisters and swelling.



L. Scott



R. Mueller

**Oxeye daisy:** Cattle avoid this plant due to its unpleasant taste, leaving it to spread within grasslands, pastures and rangelands.



J. Leekie



R. Mueller

**Quackgrass:** Very aggressive grass, spreads by rhizomes, out-competes forage and other crops.



S. Dewey, Bugwood.org



G. Graham

**Scentless chamomile:** Can reduce crop and pasture yields and be a contaminant in soil, fill material, crop seed and animal feed.



MAL



B. Stewart



L. Scott



## Invasive Plant Prevention and Control: Best Practices for Hay & Forage Producers

### Growing Hay & Forage

- » Use certified weed-free seed mixes; request a certificate of analysis from the vendor.
- » Fertilizing fields may reduce the chance of invasive plants taking over forage crops by promoting the growth of more beneficial grasses and plants.
- » Ensure manure is composted and weed-seed free.
- » Inspect your fields regularly for invasive plants; identify the species, stage of growth and treat for the specific plant type(s).
- » In weed infested areas, graze before the seed stage to help reduce seed production.
- » When invasive plants are present in forage crops, harvest before the weeds flower or set seed.
- » When using herbicides for invasive plant management, follow all local and provincial use regulations.
- » When using herbicides for invasive plant management, be aware of poisonous plants that become more palatable during degradation yet maintain their toxicity to livestock.
- » Contain the invasive plants to minimize the spread; cut and bale areas without invasive plants first.
- » Clean off all soil and plant parts from farm equipment and vehicles before moving to a new area.
- » Inspect roadsides, ditches and neighbouring properties regularly for invasive plants.
- » Take pictures of and report any invasive plants using the [Report-Invasives](#) or [Weeds BMP](#) app and mark their locations with GPS coordinates to revisit later.
- » Plant a buffer of tall vegetation to help prevent invasive plant seeds from blowing into your field.
- » Create an invasive plant management plan for your property: identify native and invasive plants, map the locations of invasive plant infestations, research integrated management practices, develop management objectives, and monitor the effectiveness of your efforts.

### Purchasing & Transporting Hay & Forage

- » Ask the seller if their hay is weed-free. Look around the seller's field and property to see if there are invasive plants present.
- » Do not transport hay that contains invasive species fragments or seeds.



## There's an app for that!

The [WeedsBMP](#) app is for livestock and forage producers and determines best management practices for invasive plants. The app contains about 95 invasive plant species including grasses, sedges, rushes, and broad-leaf plants. WeedsBMP provides information and guidance for managing and controlling the spread of invasive plants on your property. WeedsBMP also has contact information for local and regional invasive plant specialists. Download it on the App Store or Google Play store.

### How to report invasive species

Use: [Report-Invasives BC Mobile App](#)

Watch: [How to report invasives on YouTube](#)

Call: [1-888-933-3722](#) – The Invasive Species Council of BC

## Resources

Domestic Plant Protection Measures. <https://www.inspection.gc.ca/plant-health/plant-pests-invasive-species/domestic-measures/eng/1523384657071/1523384657601>

Invasive Plants in Alberta – Forages and Hay Land. [https://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex14757/\\$file/640-15.pdf?OpenElement](https://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex14757/$file/640-15.pdf?OpenElement)

Sask Forage Council – Hay BMPs for Invasive Plant Species. [http://archive.saskforage.ca/images/pdfs/Projects/Invasives/Resources/Hay\\_Factsheet\\_Online.pdf](http://archive.saskforage.ca/images/pdfs/Projects/Invasives/Resources/Hay_Factsheet_Online.pdf)

Be cautious when buying hay – Forage Specialist Jessika Guse. <https://www.realagriculture.com/2018/08/be-cautious-when-buying-in-hay-says-forage-specialist/>

Cariboo Chilcotin Invasive Plant Committee. <https://cccipc.ca/>

Cariboo Regional District. <https://www.cariboord.ca/services/invasive-plants/invasive-plants-2>

Thompson-Nicola Invasive Plant Management Committee. <https://www.tnipmc.com/>

BC Weed Control Act. [http://www.bclaws.ca/civix/document/id/complete/statreg/96487\\_01](http://www.bclaws.ca/civix/document/id/complete/statreg/96487_01)

Weed Seedling Guide 2nd Edition Agdex 640-9. <https://www.agric.gov.ab.ca/app08/ppslogin?pID=298>