



Last Updated 27.Feb.2012

Hoary Alyssum (*Berteroa incana* syn. *Alyssum incanum*)

aka hoary false madwort, hoary false alyssum

Provincial Designation: Prohibited Noxious

Overview:

Hoary alyssum is an annual, biennial, or short-lived perennial plant of the Mustard Family. Native to Eurasia, it is believed to have been introduced to North America as a contaminant of crop seed.¹ Reproduction is only by seed and germination can occur from early spring through to fall. All parts of the plant are covered with short, stellate hairs.³ It is adapted to cold winters and hot, dry summers, and develops a long slender taproot to access moisture in the soil profile. Hoary alyssum is primarily an invader of degraded range and pasture as it is not a strong competitor. Once established, a seedbank develops which can remain viable for several years.

Hoary alyssum is toxic to horses, both fresh and in cured hay. Affected horses exhibit swelling of the legs, depression and diarrhea, which normally subsides a few days after being removed from contaminated feed/pasture. In field cases horses showing symptoms ingested hay containing 30% to 70% hoary alyssum.⁵



PHOTO: www.weedscanada.ca

Habitat:

Hoary alyssum grows in dry, gravelly, nutrient poor soils (limestone/calcareous). Once seeds have germinated, ample light is important.¹

reddish-brown 1-1.5 mm lens-shaped seeds with narrow wings on the margins.¹

Identification:

Stems: There are one to several stems per plant, generally branched both at the base and above,⁴ growing 30 to 80 cm tall.²

Leaves: Basal/rosette leaves are lance shaped, 3-5 cm long, with slender petioles.⁴ Leaf margins are entire with the tips rounded, and are withered by flowering.² Stem leaves are alternate, smaller, sessile (no petiole) and decrease in size towards stem tip.²

Flowers: Flowers are borne in clusters along the stem axis, are comprised of four small, white petals 4-6 mm⁴ which are deeply notched, and have 4 green sepals.¹ Seed pods are oblong, 5-7 by 3-3.5 mm, slightly inflated (1.5 mm thick),⁴ and have a style at the tip.¹ Each pod contains 4-12

Prevention:

Maintaining pastures/range in good condition makes them weed-resistant. Healthy desirable vegetation can outcompete hoary alyssum – fertilization and irrigation will enhance the invasion protection. Gravel/soil from infested areas will contain hoary alyssum seeds and should not be moved.

Control:

Grazing: Livestock will not graze hoary alyssum if desirable forage is available. Overgrazing favors hoary alyssum invasion. No cases of hoary alyssum toxicity in ruminants are known. *Invasive plants should never be considered as forage.*

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PHOTO: Matt Lanvin

Hoary Alyssum *(continued)*



PHOTO: Brian Ostwald

Mechanical: Hand pulling is effective on small infestations but the root crown must be removed otherwise re-growth will occur. This is easiest done when the soil is moist or by using a shovel to loosen soil/pry up the root.¹ Repetition is necessary to deplete seed bank. Plant debris should be disposed of in landfill-bound garbage. Burning of mature plants will destroy seed.¹ Mowing is not effective.¹ Shallow tilling can sever the root crown but also bring buried seed to the surface for germination.¹

Chemical: Currently no selective herbicides are registered for use on hoary alyssum. Always check product labels to ensure the herbicide is registered for use on the target plant in Canada by the Pesticide Management Regulatory Agency. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

Biological: A preliminary literature survey revealed many insect species associated with Hoary alyssum in Eurasia.⁶ No biological control agents are currently available in Canada.

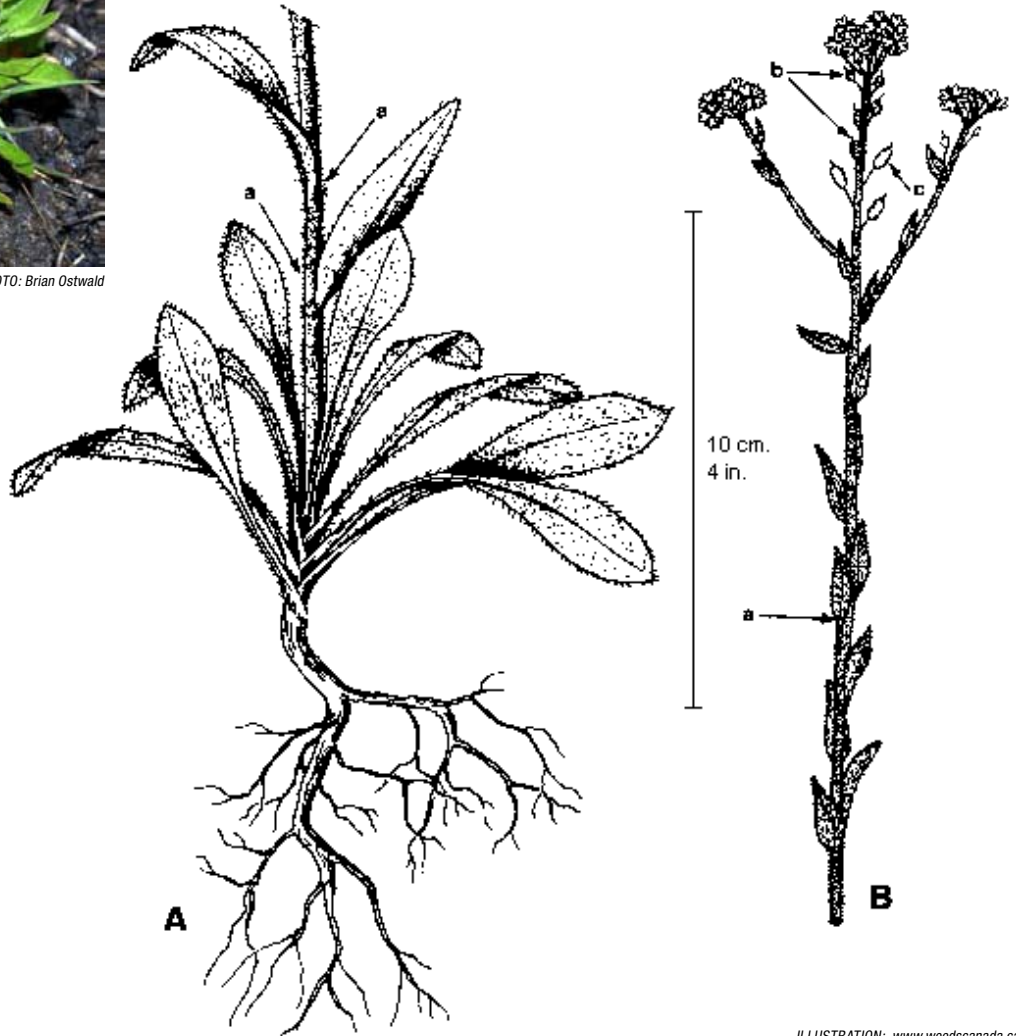


ILLUSTRATION: www.weedscanada.ca

REFERENCES

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- 2 Flora of China. *Berteroa incana*. FOC Vol. 8 Page 65. www.eFloras.org
- 3 Montana weed Control Association. Hoary Alyssum. www.mtweed.org
- 4 Hitchcock and Cronquist. 1973. Flora of the Pacific Northwest. Page 156.
- 5 R.L. Becker, N.P. Martin, M.J. Murphy. Hoary Alyssum: Toxicity to Horses, Forage Quality, and Control. University of Minnesota Extension. www.extension.umn.edu
- 6 Hoary alyssum - an emerging weed problem. www.cabi.org