

WEED IDENTIFICATION AND CONTROL IN GRASS PASTURES

Krishona Martinson, Regional Extension Educator, University of Minnesota

Controlling weeds is important when managing grass pastures. Weeds are generally less palatable, less nutritious, lower yielding, and are less dependable as a forage supply to horses than the desirable grass pasture species they replace. Many pasture weeds are on the Minnesota noxious weed list and several other pasture weeds are poisonous to horses. According to the Minnesota noxious weed law, primary noxious weeds must be controlled on all private and public land. Of the ten primary Minnesota noxious weeds, five are common pasture weeds: bull thistle, plumless thistle, Canada thistle, musk thistle and perennial sowthistle. These ten poisonous plants can affect horses in Minnesota: redroot pigweed, nightshades, common lambsquarter, common cocklebur, hoary alyssum, buttercup, horsetail, poison hemlock, bracken fern and white snakeroot. Most poisonings occur in the early spring or during a drought when the pasture forage is in short supply.

From a control standpoint, grouping weeds into categories based on life span is most practical. Annual, biennial and perennial are the main life spans of weeds.

Annual. Annuals germinate from seed, grow, mature, and die in less than one year or when killed by frost. Chemical control of annuals works best when applied in the spring to actively growing, young weeds. Mechanical control (i.e. mowing) is very effective against annuals.



Canada Thistle

Biennials. Biennials require two years to complete their life cycles. They form a rosette (group of leaves at ground level) and store food in their roots the first year and flower the second year. Control measures, chemical or mechanical, are most effective when applied during the first year's growth. If treatment is delayed until the second year, early season application of a herbicide before bloom is important.



Bracken Fern

Perennials. Perennials live more than two years, and grow back from the same roots year after year. Perennials move nutrients into their roots during fall to prepare for winter. Because of this, chemical control of perennials works best when applied in the fall to actively growing and well-developed foliage. As the nutrients move into the roots, the chemical will too; however, fall-applied herbicide must be able to move within the plant (this is called systemic). When choosing your chemical for perennial weed control, make sure it is systemic. Application of herbicides in spring, or frequent mowing during the summer is also effective in controlling growth until fall; however, mowing alone may take a few growing seasons for effective weed control.

Hoary Alyssum. Hoary Alyssum is a concern for many horse owners. Some horses experience depression and stocking up or swelling of the lower legs 12-24 hours following ingestion. In more severe cases, which are rare, an apparent founder with a stiffness of joints and reluctance of the animal to move has been observed. In very rare cases, where Hoary Alyssum comprised extremely high percentages of the hay (30-70%), circumstantial evidence exists associating the plant with the death of a few horses. However, to date, death has not

occurred in horses fed hay containing Hoary Alyssum under experimental conditions. Considering the widespread distribution of Hoary Alyssum in Minnesota and the lack of reported toxicity to animals, it is of relatively low toxicity to livestock in that sense. Horse owners should be aware of toxicity symptoms and manage pastures to reduce populations of Hoary Alyssum. Hay containing greater than 30% Hoary Alyssum should not be fed to horses.

Trees, Shrubs, Wild Flowers and Grass Weeds. Trees, shrubs, wild flowers and weedy grasses can also be detrimental to grass pastures and horses. Chokecherry bark, leaves and seeds are poisonous to all grazing animals. However, the number one poisoning problem of horses has been from maple tree leaves. During the late 1980s, 12-15 cases of horse poisoning occurred in Minnesota. Some species of oak can cause livestock poisonings. Gamble and Shinnery Oak are responsible for most of them. However, do not cut down mature trees in a pasture. Trees provide shelter from the weather and bugs. Trim branches to reduce the chance of leaf ingestion.



Poison Hemlock

Several wild flowers can be found in pastures. Few are poisonous and horses will usually not eat them if other forage is present. Crabgrass and quackgrass are common grass weeds in pastures and almost impossible to chemically control. If a large percentage of grass forage is crabgrass or quackgrass, reseeding may be required. These grass weeds are believed to have less nutritional value than other pasture forages. Other annual grass weeds (i.e. foxtail) can be controlled by timely mowing.



Hoary Alyssum

Herbicides. When using herbicides, **always read and follow labels carefully.** Follow grazing recommendations after herbicide application. Herbicides may make toxic weeds more palatable to



Absinth Wormwood

horses. Horses should be excluded from the sprayed area for 7-10 days after treatment if poisonous plants are present. And, remember herbicides alone will not result in a weed-free pasture.

Steps to Minimize Weeds in Grass Pastures.

Proper grazing management is a must. Overgrazing easily damages grass pastures and tends to pull out grass roots, giving weeds space to take hold. Protect new seedlings from grazing until they are well established and graze moderately thereafter. Allow established pastures a recovery period after grazing by removing the horses for 3-4 weeks. This will reduce weeds and increase pasture yield and nutrition value. If possible, mow after each grazing period to control many pasture weeds and encourage new pasture growth. However, do not mow the pasture closer than 4" above the soil. During hot and dry spells, remove horses from pastures. In very weedy pastures where pasture forages are thin, reseeding may be the best practice. Finally, remember that thick, well-managed pastures will choke out weeds.

For more information and to view pictures of common Minnesota pasture weeds, visit the University of MN Extension Service Horse Website at www.extension.umn.edu/horse.