

Poisonous Weeds in Horse Pastures

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Introduction

Hungry horses do not listen to warnings to avoid poisonous weeds. There is widespread belief that instinct protects animals, but this cannot be relied on for protection. Therefore, it is up to the horse owner to prevent pasture poisonings. The best way to do this is to become familiar with plants that are poisonous and by practicing good pasture management.

What makes a plant poisonous? There are several different chemical compounds capable of poisoning that can be found in a variety of plants. The chemicals range from the alkaloids, found in the nightshade family, to the glycosides, present in wild cherry and Sudan grass. The effects of poisoning can include mild irritation, sickness, or possibly death. Plant poisoning can often be difficult to diagnose, as it can resemble other physiological problems. Depending on the degree of plant toxicity, poisoning can occur due to a single contact or long term repeated contact with a plant.

The degree of danger a poisonous weed represents is a function of the plant's prevalence, toxicity, and desirability. Frequently, if good quality forage is plentiful in the pasture, horses will likely avoid poisonous plants. In the absence of good quality forage during periods of drought or when pastures are overgrazed, however, animals may begin to investigate undesirable plants available in the pasture. Fortunately, many poisonous plants are not palatable and horses will not readily eat them unless adequate forage is not available. On the other hand, some poisonous plants are highly palatable and should be identified and removed.

Inspect Pastures

A primary way to avoid poisoning from plants is to walk the pastures and inspect for poisonous plants. If poisonous plants are present, they should be removed. Do

not forget to inspect three or four feet beyond the fence line of the pasture. Many horses will stretch beyond the fence for forage. Walking the pastures will also give you an opportunity to evaluate the productivity of the pasture. Another thing to look for is the density of planted forage species. Is adequate forage present for the horses, or does the pasture contain many bare areas? Are there more weeds present than forage species? Also, check the hedgerows surrounding the pasture. Many hedgerows contain wild cherry, red maple, and black locust trees or seedlings which can be poisonous. Do not allow broken branches to remain in the pasture. In addition, avoid throwing shrub and tree prunings into the pasture. Many cultivated shrubs and trees can be dangerous to horses.

Pasture Management

The best defense against poisonous plants is to promote good stands of desirable grass and legume species through a sound pasture management program. Pasture management should include soil testing, liming and fertilizing, good grazing management, clipping, and dragging. Weed, insect, and disease control may also be required for pastures. A healthy, productive pasture will resist invasion from poisonous weeds and provide good quality forage. When pastures are overgrazed, horses will eat the grass and legume species down to the soil, which allows weeds to take over.

Any plant that is not wanted in the pasture is a weed. Many weeds can be eliminated with good pasture management. Weeds can be controlled mechanically by mowing, culturally with good grazing management, or chemically with herbicides. Most poisonous plants are broadleaf plants or woody species. For general broadleaf weed control in pastures, the best results are obtained when weeds are actively growing. Dicamba, 2,4-D, or a combination of Dicamba and 2,4-D may be sprayed in permanent pastures to control many annual and perennial broadleaf weeds. Dicamba and 2,4-D will kill or severely

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injure most legumes that are in pastures. When using these herbicides, extra precautions should be used to prevent drift. For more complete information regarding pasture herbicides contact your county agricultural agent or refer to the current "Pest Management Recommendations for Field Crops," which can be obtained at your local Rutgers Cooperative Extension office or from the Rutgers Cooperative Extension Publications Distribution Center, Cook College, 16 Ag Extension Way, New Brunswick, NJ 08901-8551.

Poisonous Plants of Concern to Horse Owners

The following list contains some of the more common poisonous weeds that may be of concern to horse owners. Note: this list does not necessarily include every poisonous plant that might be found in New Jersey.

Algae

Black (Deadly) Nightshade (*Solanum nigrum*)
Black Locust (*Robinia pseudoacacia*)
Black Walnut (*Juglans nigra*)
Bouncing Bet (*Saponaria officinalis*)
Brackenfern (*Pteridium aquilinum*)
Buttercups (*Ranunculus* spp.)
Cocklebur (*Xanthium strumarium*)
European Bittersweet (*Solanum dulcamara*)
Ground Ivy (*Glechoma hederacea*)
Horsenettle (*Solanum carolinense*)
Horsetail (*Equisetum arvense*)
Jimson Weed (*Datura stramonium*)
Larkspur (*Delphinium* spp.)
Mayapple (*Podophyllum peltatum*)
Milkweeds (*Asclepias* spp.)
Mountain Laurel, Rhododendron, Azalea (*Ericaceae* spp.)
Nightshades (*Solanum* spp.)
Poison Hemlock (*Conium maculatum*)
Pokeweed (*Phytolacca americana*)
Red Maple (*Acer rubrum*)
Skunk Cabbage (*Symplocarpus foetidus*)
Sorghum/Sudan Grass (*Sorghum* spp.)
St. Johns-wort (*Hypericum perforatum*)
Star-of-Bethlehem (*Ornithogalum umbellatum*)
Tall Fescue (*Festuca arundinacea*)
 [endophyte containing varieties]
Water Hemlock (*Cicuta maculata*)
White Snakeroot (*Eupatorium rugosum*)
Wild Cherry (*Prunus* spp.)
Yellow sweet Clover (*Melilotus officinalis*)
Yew (*Taxus* spp.)

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World Wide Web Resources

The following resources on the World Wide Web can be of assistance in identifying poisonous plants. Many of the sites contain images to aid in identification. If you suspect a plant may be poisonous and need assistance identifying the plant, contact your county agricultural agent.

Rutgers Cooperative Extension Weed Images Page

www.rce.rutgers.edu

This site on the Rutgers Cooperative Extension Homepage contains images and descriptions of many weeds that occur in New Jersey. Not all plants listed are poisonous.

Cornell University Poisonous Plants Page

www.ansci.cornell.edu/plants/plants.html

This site contains an extensive collection of plant images with text covering botany, chemistry, and toxicology. Also contains information about diagnosis and prevention of poisonings.

Indiana Plants Poisonous to Livestock and Pets

<http://vet.purdue.edu/depts/addl/toxic/cover1.htm>

This site contains an extensive database searchable by toxicity, species, botanical type, and pictures.

Poisonous Plants of North Carolina

www.ces.ncsu.edu/depts/hort/consumer/poison/poison.htm

This site contains an extensive collection of images and is searchable by common name, scientific name, and by poisonous plant part.

Weed Science Society of America

<http://ext.agn.uiuc.edu/wssa>

This site contains the Photo Herbarium—a picture database of approximately 200 common American herbs, plants, and weeds. Not all plants listed are poisonous. This is a good resource for the identification of plants.

Poisonous Plants of Veterinary Importance

<http://cal.vet.upenn.edu/poison/index.html>

This site, maintained by the University of Pennsylvania, contains numerous images of various poisonous plants.