



Plants Toxic to Horses

Horse owners should learn to recognize toxic plants and be aware of the symptoms they can cause.

 ARTICLES | UPDATED: JULY 27, 2017

IN THIS ARTICLE

- Alsike Clover
- White and Red Clover
- Tall Fescue
- Buttercup Species
- Pokeweed
- Nightshade Species
- Horsenettle
- Poison Hemlock
- Water Hemlock
- Jimson Weed
- White Snake Root
- Milkweed
- Cherry (Black, Pin, Choke)
- Red Maple
- Box Elder Maple
- Black Walnut
- Oaks (Black, Chestnut, Red, Pin, White)

- Buckeye or Horse Chestnut
- Black Locust
- Rhododendron, Mountain Laurel, Azalea
- Bracken Fern
- Yew (English or Japanese)

Alsike Clover



Digger bee on Alsike clover. Photo credit: Bigstock/Dbengamin

Two disease syndromes in horses have been associated with grazing alsike clover: photosensitization and liver disease, which is less common.

- Affected species: Horses
- Low toxicity
- Common in some pastures

- Symptoms: Photosensitization (blistering of unpigmented skin when exposed to sunlight) and liver disease.
- Management: Remove horse from the pasture, manage pastures to promote grass, eliminate clover.

Photo: Photosensitivity injury



White and Red Clover



White and red clover. Photo credit: BigStock/Greywall Studio

Horses grazing pastures with red and white clover may become affected by "slobbers." The toxin behind the slobbers, slaframine, is produced by a fungus that afflicts clovers, which stimulates the salivary glands and causes horses to drool.

- The clover plant itself is not toxic.
- Slaframine is produced by "black patch fungus," *Rhizoctonia*, which grows on clover during periods of stress.
- Symptoms: Salivation and drooling
- Affected species: Only horses
- Management: Remove horses from clover and provide plenty of fresh water

Tall Fescue



Tall fescue meadow grass. Photo credit: BigStock/V_Nikitenko

Endophyte-Infected Tall Fescue – Kentucky 31

- Common grass in this region
- Large leaf blades with sharp edges and prominent veins, shiny on lower surface
- Not a preferred plant until after frost
- Kentucky 31 tall fescue contains an endophyte that produces a toxin called ergovaline
- The toxin is found in all plant tissues and seeds.
- Affected species: sheep, cattle, goats, horses
- Mares may have long pregnancies, abort foals, or have other reproductive problems if they graze infected fescue in the last three months of pregnancy.
- Endophyte-free tall fescue varieties are available commercially. Novel-endophyte or "endophyte-friendly" varieties do contain an endophyte for enhanced growth but do not produce ergovaline and are safe for pregnant mares to graze.

Buttercup Species



Tall Buttercup. Photo Credit: Montana Statewide Noxious Weed Awareness and Education Program, Montana State University, Bugwood.org

- All livestock are affected.
- Toxicity - low
- Common in pastures and marshes
- Poisonous part - leaves and flowers
- Symptoms - irritated tissues in the mouth and throat. Affects the gastrointestinal system (colic, diarrhea), causes excessive salivation.

Pokeweed



Common Pokeweed. Photo Credit: Joseph M. DiTomaso, University of California - Davis, Bugwood.org

- Affects all livestock - especially pigs.
- Toxicity - moderate
- Found in rich, disturbed soils such as barnyards, moist woodlands and pastures
- Poisonous part - all parts, but mainly the roots
- Symptoms - Affects the gastrointestinal system (colic and diarrhea) and central nervous system (convulsions).
- Cooked berries are sometimes used in pies.

Nightshade Species



Bittersweet Nightshade. Photo Credit: Joel Floyd, USDA APHIS PPQ, Bugwood.org

- All livestock are affected.
- Toxicity - moderate
- Found in disturbed soils, rich pastures, and woods
- Poisonous part - berries and vegetation
- Symptoms - Affects central nervous system (trembling, paralysis, shock, coma); gastrointestinal system (colic, diarrhea and impaction)

Horsenettle



Horsenettle. Photo Credit: Ohio State Weed Lab, The Ohio State University, Bugwood.org

- All livestock are affected.
- Toxicity - moderate
- Distribution - pastures, cultivated fields, hay fields
- Poisonous part - all parts, especially berries. Remains toxic in hay.
- Symptoms - Affects the gastrointestinal (salivation, colic, diarrhea) and central nervous system (muscle tremors, weakness, depression)

Poison Hemlock



Poison Hemlock. Photo Credit: Jan Samanek, Phytosanitary Administration, Bugwood.org

- All livestock are affected.
- Toxicity - extremely toxic, 4-5 pounds will kill a 1,000 pound animal
- Distribution - disturbed or waste areas, roadsides, ditches
- Poisonous part - all parts are extremely toxic
- Symptoms - Affects the central nervous system (blocked spinal cord reflexes, muscle tremors, incoordination, paralysis), frequent urination, sudden death due to respiratory failure.

Water Hemlock



Water Hemlock. Photo Credit: Elmer Verhasselt, Bugwood.org

- All livestock are affected.
- Toxicity - extremely toxic (a piece of root the size of a walnut will kill a cow in 15 minutes)
- Poisonous part - all parts, especially the root
- Distribution - marshes, ditches, wet pastures
- Symptoms - Affects central nervous system, causing nervousness, breathing difficulties, muscle tremors, collapse, convulsions, death.

Jimson Weed



Jimson Weed. Photo Credit: Howard F. Schwartz, Colorado State University, Bugwood.org

- All animals affected, including chickens.
- Toxicity - extreme
- Distribution - crop fields, waste areas, barnyards
- Poisonous part - entire plant, especially seeds
- Symptoms - Affects central nervous system. Has hallucinogenic properties
- Jimson weed has a strong, foul odor and an unpleasant taste. Animals are often poisoned when feed is contaminated with jimson weed seed.
- Jimson weed is an annual plant; mowing helps eliminate these plants.

White Snake Root



White Snakeroot. Photo Credit: John Triana, Regional Water Authority, Bugwood.org

- Affects horses, cows, sheep, goats, pigs and chickens.
- Toxicity - high
- Distribution - common in moist areas, edge of woods, along roads
- Poisonous parts - leaves and stems
- Symptoms - trembling, stiffness, ataxia, coma, death
- White snake root's toxin, trematol, passes to humans in milk resulting in milk sickness.

Milkweed



Common Milkweed. Photo Credit: Richard Gardner, Bugwood.org

- Affects livestock and poultry.
- Toxicity - high
- Distribution - swamps, bogs, dry fields and pastures
- Poisonous part - entire plant
- Symptoms - weakness, seizures, respiratory difficulties, coma, death.
- Milkweed's latex-like sap makes the plant very unpalatable.

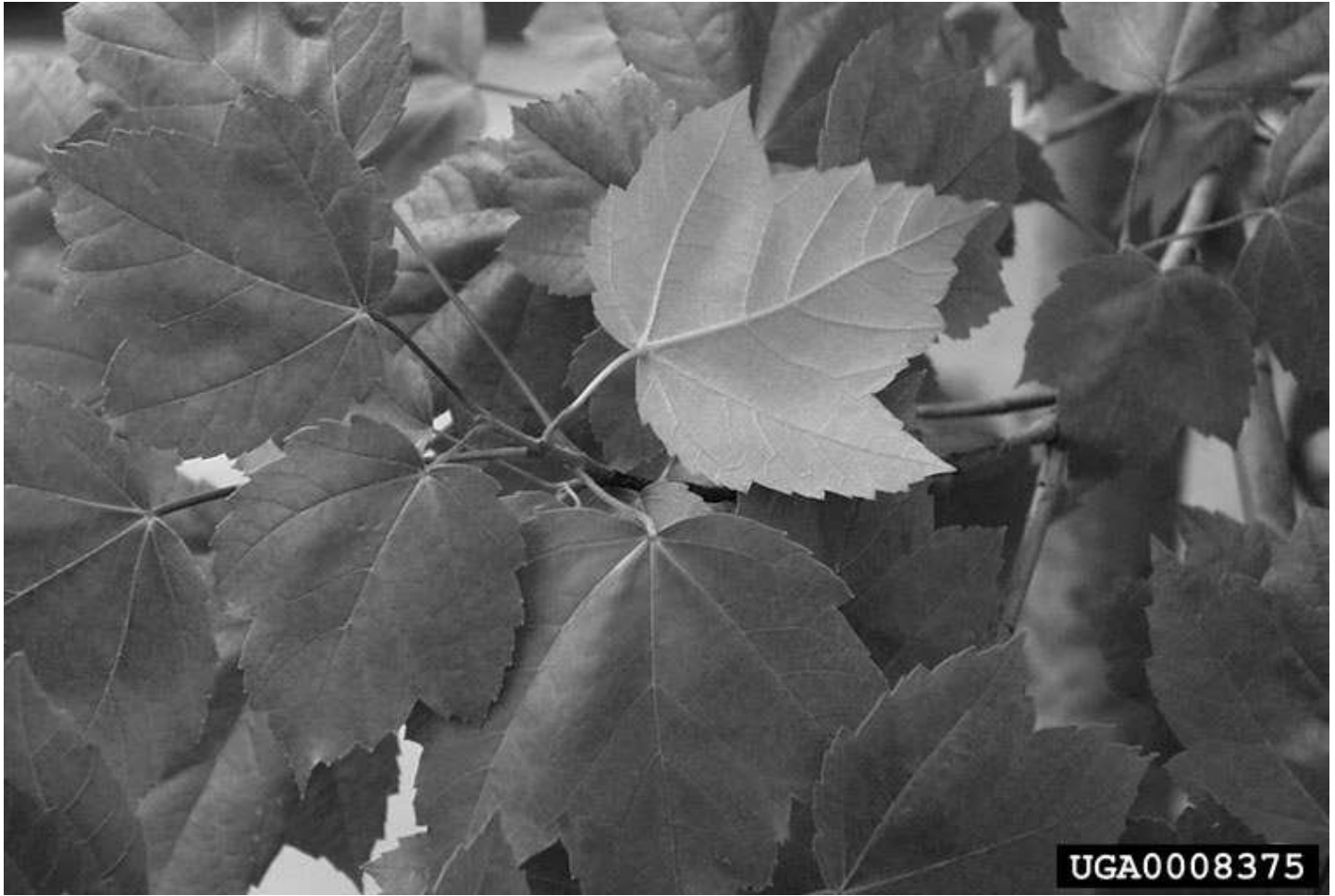
Cherry (Black, Pin, Choke)



Black Cherry. Photo Credit: Richard Webb, Bugwood.org

- Affects all livestock, most dangerous to ruminants.
- Toxicity - highly toxic
- Poisonous part - leaves, twigs, bark and seeds contain cyanide, wilted leaves are more toxic than the rest.
- Symptoms - anxiety, breathing problems (suffocation), staggering, convulsions, collapse, death.

Red Maple



Red Maple. Photo Credit: Paul Wray, Iowa State University, Bugwood.org

- Only horses and ponies are reported to be affected.
- Toxicity - **extremely** toxic (1.5-3 pounds cause toxicity)
- Poisonous part - wilted or dried leaves
- Symptoms - breathing difficulties, jaundice, dark brown urine, death.
- Toxins (gallic acid and others) destroy red blood cells. Red maple hybrids, such as silver and sugar maple, also have toxins.
- Leaves are most dangerous when wilting (i.e. a branch comes down during a storm), but fallen autumn leaves are also toxic for 30 days or so and should be removed from pastures.

Box Elder Maple



Box Elder. Photo Credit: <https://www.flickr.com/photos/cricketsblog/26262670762> Melissa McMasters

Seeds from the boxelder maple cause the equine muscle disease Seasonal Pasture Myopathy.

- Affected species - horses
- Toxicity - high. Quantity required for toxicity is unknown, but SPM is 75-90% fatal.
- Poisonous parts - Seeds contain toxin, hypoglycin A, which interferes with fat metabolism and breaks down respiratory and muscle cells. Only female boxelder trees produce seeds. Male trees are not dangerous.
- Symptoms - Tremors, weakness, stiffness, dark urine, rapid breathing, and death - usually within 48 hours

Black Walnut



Black Walnut. Photo Credit: Jason Sharman, Vitalitree, Bugwood.org

- Species affected - horses
- Toxicity - moderately toxic
- Poisonous parts - bark, root, nuts contain juglone, which may be involved in toxicity. Walnuts and hulls on the ground may become moldy and cause toxicity if consumed.
- Symptoms - Horses bedded on shavings or sawdust containing black walnut develop colic, edema and laminitis.
- No amount of black walnut is acceptable in bedding.
- If removing trees or branches in pastures, be careful to clean up all sawdust left in the pasture.

Oaks (Black, Chestnut, Red, Pin, White)



Red Oak Leaves. Photo Credit: <https://www.publicdomainpictures.net>

- Affects cattle, sheep, horses and pigs.
- Toxicity - moderately toxic
- Poisonous part - New young leaves most toxic, acorns more toxic when green than when mature
- Symptoms - Poor appetite, weight loss, diarrhea, increased drinking, increased urination, kidney failure, edema, death.

Buckeye or Horse Chestnut



Horse Chestnut. Photo Credit: John Ruter, University of Georgia, Bugwood.org

- Affects all livestock.
- Toxicity - moderate to high
- Poisonous part - leaves, seeds, young sprouts; poisoning in spring due to early sprouting
- Symptoms - Affects gastrointestinal and central nervous systems

Black Locust



Black Locust. Photo Credit: Jan Samanek, Phytosanitary Administration, Bugwood.org

- Affects all livestock species.
- Toxicity - moderate to high
- Poisonous parts - leaves, seeds, bark, wood (fence posts)
- Symptoms - Causes severe gastritis, colic, depression

Rhododendron, Mountain Laurel, Azalea



Rhododendron. Photo Credit: Richard Webb, Bugwood.org

Common landscape shrub, also found in the forest.

- Affects all livestock.
- Toxicity - high
- Poisonous part - all parts
- Symptoms - Stomach irritation, abdominal pain, abnormal heart rate and rhythm, convulsions, coma, death

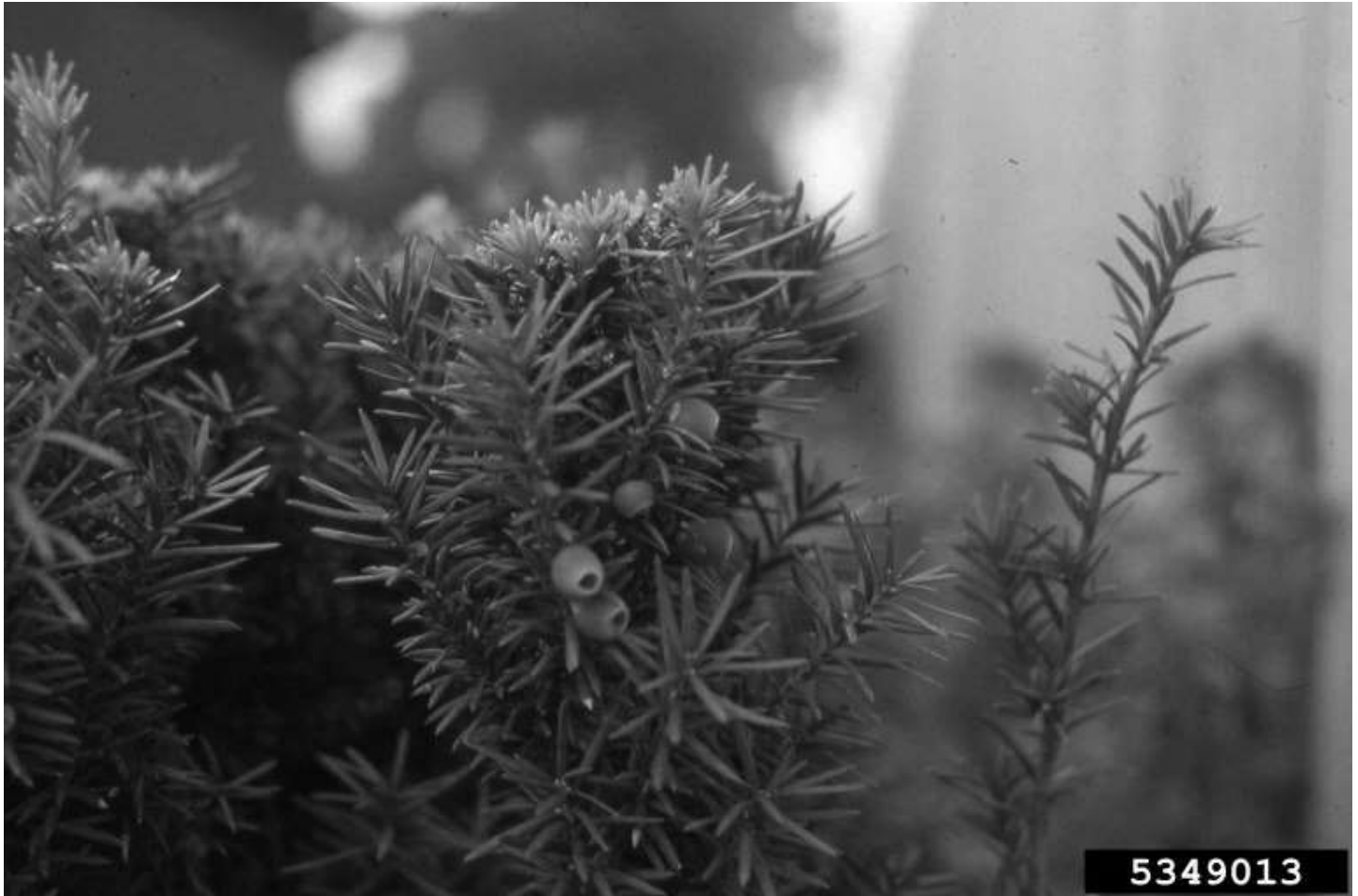
Bracken Fern



Bracken Fern. Photo Credit: David Stephens, Bugwood.org

- All livestock are affected.
- Toxicity - low to moderate
- Distribution - moist forests
- Poisonous part - All plant parts contain toxin which destroys vitamin B1.
- Symptoms - Weight loss, weakness, gait abnormalities, abnormal heart rate and/or rhythm, inability to rise, death
- Some animals develop a preference for this plant.

Yew (English or Japanese)



Yew. Photo Credit: Richard Webb, Bugwood.org

- Affects all livestock and humans
- Toxicity - **Extreme**
- Poisonous part - all plant parts, especially high in leaves during winter.
- Symptoms - Muscle trembling, incoordination, colic, slow heart rate, death.
- Yews are commonly planted as landscape shrubs on home properties and even show grounds.