



U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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Equine Winter Care

By: Marcia Hathaway, PhD, Univ. of Minn.

Horses prefer, and are better off, outdoors even in cold weather, and will acclimate to cold temperatures if given the opportunity. However, horses should have access to shelter from wind, sleet, and storms. Free access to a stable or open-sided shed works well, as do trees if a building is not available.

In the absence of wind and moisture, horses tolerate temperatures at or slightly below 0°F. If horses have access to a shelter, they can tolerate temperature as low as -40°F. However, horses are most comfortable at temperatures between 18 and 59°F, depending on their hair coat.

Keep in mind that a horse's winter coat can be an excellent insulator. However, its insulating value is lost if it gets wet, so it is important to keep the horse dry and sheltered from moisture. Blanketing the horse is beneficial when the effect of wind-chill and/or temperature is less than comfortable. During comfortable temperatures, blanketing is not beneficial. Blankets must also be kept dry.

If you house your horse in a closed and heated stable, make sure it is properly ventilated. Poorly ventilated barns can result in respiratory problems.

Energy needs for maintenance horses increase 0.7% for each degree of temperature below 18°F. For example, if the temperature is 0°F, a 1,000 pound idle, adult horse would need an additional 1.3 pounds of forage daily. It is best to provide the extra energy as forage. Some believe that feeding more grain will help keep a horse warmer. However, not as much heat is produced as a by-product of digestion, absorption, and utilization of grain as there is from the microbial fermentation of forages. Consequently, increasing the amount of forage in the diet will help meet the increasing energy needs and will result in an increase in microbial fermentation which will help keep the horse warm. Most data suggest that the need for other nutrients do not change during cold weather.

Water should be kept between 45 to 65° F to maximize water consumption. Waters should be cleaned regularly (even in winter), and clean, fresh water should always be available, regardless of temperature. Also, consider feeding loose salt instead of block salt, as horses may not want to lick blocks during winter months.

Ask the Expert

By: M. Hathaway, PhD & J. Wilson, DVM, Univ. of Minn.

Q: Why is snow not a suitable source of water for horses? Don't wild horses live on snow?

A: First of all, according to Chapter 346 in the MN Pet and Companion Animal Welfare Act, "equines must be provided with clean, potable water in sufficient quantity to satisfy the animal's needs or supplied by free choice. Snow or ice is not an adequate water source". There have been a few scientific studies that show some horses who are acclimated to winter weather conditions can receive their water requirements from snow.

However, there are serious health risks associated with snow consumption, including the adjustment period as horses learn to ingest snow, the actual water content of the snow, and total water intake. Some wild horses can receive their water needs from snow, but the risk of gastrointestinal tract problems, colic, and reduced feed intake is significant for domesticated horses. Relying on snow as the source of water for domesticated horse in MN is illegal and not recommended.

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Upcoming Events

2009 Fall Regional Horse Owner Programs

Saturday, October 3rd
9:30 am to 4:00 pm
U of M Equine Center
St. Paul, MN

Focus on Equine Metabolic Syndrome and Genetics

Saturday, October 24th
1:00 to 4:00 pm
Red Horse Ranch Arena
Fergus Falls, MN

Saturday, November 14th
1:00 to 4:00 pm
Howard Lake Middle School
Howard Lake, MN

Pre-registration required and attendance is limited.

\$20 registration fee includes meeting proceeding and light refreshments or lunch.

Register now at www.extension.umn.edu/horse

Lunch & Learn Webinar

Wed Oct 21 at noon
"Application of Equine Genetics" by Stephanie Valberg, DVM, PhD

Register at: www.extension.umn.edu/horse

Webinar is free, but registration is required.



Research Update: Euthanasia Drug and Compost

Composting is one option for disposing of a horse carcass after euthanasia. Researchers at West Texas A&M recently conducted a study to determine if residues of sodium pentobarbital, used in euthanasia, might remain in compost. .

Horses that had been euthanized by a veterinarian were composted with layers of hay and stall cleanings and mechanically aerated every 90

days.

After six months, samples from eight different compost piles contained from 0.008 to 3.16 parts per million (ppm) sodium pentobarbital. The research team is conducting further research to assign relevance to these numbers and learn more about the environmental fate of pentobarbital.

Currently, researchers

recommend avoiding the use of compost containing sodium pentobarbital as fertilizer. Care should be taken to compost euthanized animals in areas where residues are less apt to leach into ground water or run off into ponds or streams.

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Salmonella in Horses Cont.

By: A. Beaudoin, DVM & S. Valberg, DVM, Univ. of Minn.

Shedding of *Salmonella* organisms can be stimulated by stress or illness. Hence, horses seen at veterinary hospitals are more likely to shed *Salmonella* than are horses seen in their own barns.

Due to this fact and the risk of people becoming infected with *Salmonella* from an infected horse, equine hospitals have personal and

equine patient hygiene steps in place to help prevent disease transmission.

The UMN has an infectious disease group that monitors the environment and any potential problems. High risk animals are cultured on arrival and during their hospitalization. The staff is also responsible for routine sampling of the hospital facility, including the

floors and walls of stalls, hallways, treatment rooms, and surgery suites. The hospital also has a separate isolation building. Horses that have *Salmonella* positive test results are moved to this isolation unit, where there are strict regulations regarding the use of disposable protective clothing and good hygiene practices to prevent spread.

Weed Watch: Hoary Alyssum

By: Krishona Martinson, PhD, Univ. of Minn.

This year, numerous horses have needed veterinary care after ingesting hoary alyssum. Hoary alyssum is a perennial weed that is commonly found in pastures and hay fields after areas experience drought. Horses will usually avoid grazing hoary alyssum in a pasture as long as adequate forage is available. It is very difficult for horses to avoid ingesting hoary alyssum when baled in hay.

Hoary alyssum is light green to gray in color with white flowers. The seeds are small and oblong and easily seen in baled hay (Figure 1).

Horses who ingest hoary alyssum may experience stocking-

up or swelling of the limb(s)(Figure 2), founder, and/or death.

The toxic dose of hoary alyssum is estimated at 10% (of the plant) in hay, but is know to affect horses differently. Some horses have a zero tolerance to hoary alyssum. Do not feed hay containing more than 10% hoary alyssum to horses.

Figure 1. Hoary Alyssum in Hay



Treatment includes removing the hoary alyssum source and supportive care for lameness. For more information on hoary alyssum and for additional plant photos visit <http://www.extension.umn.edu/horse/components/pdfs/FactSheets/Hoary%20Alyssum%20FS.pdf>

Figure 2. Stocking up of the lower right limb after ingesting hoary alyssum (left limb unaffected, which is commonly seen).

