



U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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Research Update: Long Distance Travel

Equine transportation can be associated with a variety of serious health disorders causing economic losses. However, statistics on horse transport are limited and data on transport related diseases are available only for horses transported to abattoirs for slaughter.

This study analyzed reports of transport related health problems identified by drivers and horse owners for 180 journeys of a horse transport company transporting horses between the east and west coasts of Australia (about 2,500 miles).

Records showed that 97% (1,604/1,650) of the horses arrived at their destination with no clinical signs of disease or injury. Based on the veterinary reports of the affected horses (3% of horse were affected), the most common issues were respiratory problems (27%),

gastrointestinal problems (27%), pyrexia (19%); traumatic injuries (15%), and death (12%). Journey duration and season had a significant effect on the distribution of transport related issues with a marked increase of the proportion of the most severe problems in spring and after 20 hours in transit. Elevated disease rate predictions were seen for stallions and colts, horses aged over 10 years, and Thoroughbreds.

Overall, the data confirmed that long haul transportation is mostly safe, but there is a risk for some horses. Hauling horses long distances requires appropriate management to minimize transport stress and ensure health and welfare of horses.

For more information on this study, click [here](#). *Summarized by Krishona Martinson, PhD, University of Minnesota*

Ask the Expert: Horses and Fireworks

Question: My neighbors host a 4th of July party every year with large fireworks. The fireworks spook and scare my horses; what can I do to help calm my horses?

Response: Fireworks can certainly cause panic in most horses (and dogs and cats), especially if displayed nearby. Here are a few tips to keep your horse calm:

1. Keep your routine as consistent as possible. Sometimes moving the horses to a different location or separating them from the herd can cause just as much fear.
2. If you plan to move your horses to a different location (or inside the barn), give them about a week to acclimate to the new surroundings.
3. Check your paddock or stalls for possible issues, including uneven ground, sharp edges and broken boards. Try and limit potential injuries.

4. If your horse is housed inside, try playing soothing music to drown out the noise from fireworks.
5. Try using a slow-feeder to divert the horses attention.
6. Some horses will tolerate ear plugs that can help reduce noise.
7. Do not try to comfort your horse during the fireworks. It will be safer for you and your horse if you are not inside the paddock or stall.
8. Start desensitizing your horse to loud noises. It might not help for this year, but may help in the future.
9. If necessary, talk to your veterinarian about the possibility of a sedative or a herbal supplement. Keep in mind some of these products may be prohibited at some shows.

By: Krishona Martinson, PhD, Univ. of MN

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Upcoming Events

Equine Pasture

Management Program

One farm visit and a customized pasture and grazing management plan
April 1 - August 1, 2017
\$650 per farm
To register, click [here](#).

Horse Owner Education Program

October 21, 2017
UMN Equine Center
St. Paul, MN
Program and registration information available in September

Youth Horse Owner Extravaganza

November 4, 2017
UMN Equine Center
St. Paul, MN
Program and registration information available in September



Lyme Disease in Horses

Author: Julia Wilson, DVM, Board of Veterinary Medicine

Ticks can transmit a number of disease-causing organisms to horses, including Lyme disease. Lyme disease is caused by the bacterium *Borrelia burgdorferi*. Many horses are exposed to this organism through tick bites, but few develop clinical illness, usually months post tick bite.

As in dogs and people, the possible diagnosis of Lyme disease often arises when more common causes of lameness, joint swelling, kidney disease, moon blindness or incoordination have been ruled out. Typically, two blood samples are

taken 2 to 3 weeks apart to see if anti-Borrelia antibody levels have changed significantly to indicate active infection. The two samples are important because many normal horses may carry high antibody levels. The disease can also be diagnosed by finding the organism in tissue taken by biopsy from an affected joint or lymph node. The SNAP test kits utilized for testing dogs for Lyme disease are likely valid for use in the horse, but so far are not licensed for that purpose.

If evidence of Lyme disease is found, a veterinarian may try a

course of antibiotics to see if this will improve the horse's clinical abnormalities. There are currently no Lyme vaccines approved for use in the horse.

Horse owners need to be tick-vigilant and manage their horses' environment to reduce tick habitat. Clearing brush out of pastures and along both sides of fence lines is recommended. Keeping pastures mowed may also be helpful. Before riding through long grass or brush, use of topical insecticides is highly recommended.

For more information, click [here](#).

Grazing Horses on Teff, Alfalfa and Perennial Ryegrass

Yield and forage nutritive value are two factors livestock owners must consider when determining which forage to utilize during the grazing season. However, little research has been done to compare different types of pasture species under rotational grazing in the Upper Midwest.

As a result, varieties of three forage species, including teff (a warm-season annual grass), perennial ryegrass (a cool-season perennial grass) and alfalfa (a perennial legume) were evaluated during the 2016 grazing season in St. Paul, MN. Perennial ryegrass and alfalfa were grazed monthly from May to October (with the exception of September), while Teff was grazed monthly from July to September. Alfalfa and perennial ryegrass pastures were established in 2015, while teff pastures were established on June 6, 2016.

Six adult horses grazed for approximately 6 hours a day for three consecutive days each month during the grazing season. Forage yield and nutritive values were evaluated prior to grazing which

was initiated when perennial ryegrass and teff were between 8 and 10 inches or when alfalfa reached bud stage. Following grazing, manure was removed and any remaining forage was mowed to 3 (alfalfa) or 4 inches (perennial ryegrass and teff) and allowed to regrow.

Alfalfa had the highest yield at in comparison to perennial ryegrass and teff (see below Table). However, perennial ryegrass was grazed 5 times throughout the grazing season while teff was only grazed 3 times. While these results suggest alfalfa is the most productive pasture species, the ability of alfalfa to withstand long-term grazing needs to be explored. Teff also appears to be a productive annual pasture species option.

Alfalfa also had the highest crude protein (CP) and equine digestible energy (DE), followed by perennial

ryegrass and teff (Table 1. Both alfalfa and teff had lower nonstructural carbohydrates (NSC) values in comparison to perennial ryegrass. Additionally, teff had the highest Acid Detergent Fiber (ADF) and Neutral Detergent Fiber (NDF) values while alfalfa exhibited the lowest values.

These results suggest teff is more suitable for horses with lower energy demands or horses prone to metabolic concerns. In comparison, alfalfa and perennial ryegrass have the capability of meeting nutritional requirements of horses with elevated nutritional needs. However, all forages meet the DE and CP requirements of adult horses at maintenance based on consuming 2.5% BW on a dry matter basis each day.

For more information, click [here](#).

By: Michelle DeBoer, MS, University of Minnesota

Species	Yield	CP	NDF	ADF	NSC	DE
	Tons/Acre	% Dry Matter				Mcal/lb
Alfalfa	6.9	28	39	29	8.4	1.15
Perennial Ryegrass	3.2	21	51	30	11.7	1.08
Teff	2.8	18	63	36	8.2	0.93