



# U of M Horse Newsletter

*Providing research-based information to Minnesota Horse Owners*

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## When To Call Your Vet

By: Erin Malone, DVM, U of M

Almost nothing is scarier than finding your horse injured and not knowing what to do, particularly if you are away from home. Over the next several months, help in identifying true emergencies and guidelines on what to do while you wait for the vet to arrive will be discussed. First, know your horse's normal vital signs. You should know how to take your horse's temperature, pulse and respiratory rate as well as to check mucous membrane color and signs of good hydration. This information can then be relayed over the phone to allow your vet to better assess the urgency of your

horse's problem. Have your vet teach you how to take these measurements next time they see your horse. Then practice while your horse is relaxed and healthy. There is variation in what is "normal" for a particular horse, and practicing will help you determine his/her particular baseline. Normal rectal temperature is 99-100.5 F; call your vet if the temperature is 102, especially if the temperature is greater than 104F. Normal pulse is 30-44 beats/minute (higher in foals); call your vet if the pulse is over 50 beats/minute. Normal respiratory rate is 8-12 beats/minute; call your vet if the rate stays over 30 beats/minute. Normal

mucous membrane color is pink and moist. Call your vet if the color changes or the membranes become dry or tacky. Normal capillary refill time is less than 2 seconds; call your vet if it takes greater than 3 seconds. Remember: you know your horse better than just about anyone. Don't hesitate to call even if the vital signs are normal, but the horse isn't acting right or not eating normally.

Next month, when to call your vet in the cases of colic, wounds and lameness will be discussed.

## Upper Midwest Hay List

By: Paul Peterson, PhD, U of M

Many parts of Minnesota experienced the worst drought in nearly 20 years, and some livestock producers are having difficulty finding hay and other forage for their animals. To help producers in this situation, the Minnesota Department of Agriculture (MDA) has teamed with the University of Minnesota Extension Service to offer a "Hay List" website that matches farmers needing forage with those who have forage to sell or donate. The Upper Midwest Hay List can be accessed at [http://](http://www.haylist.umn.edu)

[www.haylist.umn.edu](http://www.haylist.umn.edu). The Hay List is a self-service tool that enables buyers and sellers of hay and straw in the U.S. and Canada to announce and search available or needed hay lots. The site is a cooperative effort of the Extension Services of Minnesota, Illinois, Wisconsin, and South Dakota. There is no charge to list hay or to search hay listings, and lots are not required to be located within the sponsoring states. Users do not need to register with the system for searches but are required to register to enter

buyer or seller lots. Registration provides a hay list ID that allows users to easily revise, add or remove lots. Buyer and seller lots can be searched by a number of criteria, including hay type, bale type, geographic proximity and state or province. Lots remain in the system for 60 days. Sellers assume all responsibility for accurately listing their hay lots. Users should be aware that information is not verified by the sponsoring organizations.

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## Up Coming Events

### REGIONAL HORSE OWNER PROGRAMS

- February 10: U of M St. Paul Campus at the College of Vet Medicine.
- February 17: Crookston at the UM Crookston Horse Facility.
- February 24: Rochester at the Heintz Center.
- March 10: Foley at the Foley School.
- March 24: Cloquet at the Cloquet Forestry Center.

Pre-registration is required for all programs and registration is limited.

On-line registration is available at:

[www.cvm.umn.edu/outreach](http://www.cvm.umn.edu/outreach).

The cost to attend each program is \$35/person which includes lunch and printed materials.

For more information visit [www.extension.umn.edu/horse](http://www.extension.umn.edu/horse) or contact Kristi at 888-241-0719 with additional questions or to register via mail.



Q: Is nitrate poisoning a concern with horses?

A: If nitrite is absorbed in blood in sufficient quantities it may convert hemoglobin to methemoglobin. Methemoglobin does not release oxygen to tissues, and can interfere with the animal's ability to use oxygen. Nitrates are normally found in forages, however, some forages can accumulate large concentrations of nitrates during dry or drought conditions (like this year). Ruminant animals

**Ask the Expert** By: Mike Murphy, DVM, U of M

like cattle and sheep are reported to be about 10 times more susceptible to nitrate poisoning than horses because their rumen converts nitrate to nitrite. The same reaction may take place in the cecum (hindgut) of horses to a lesser extent. Thus horses are generally tolerant of higher concentrations of nitrate in forage than cattle are. The symptoms of nitrate poisoning in horses include: difficulty breathing, bluish-colored mucous

membranes, weakness, tremors, and possibly death. Research has shown that feeding hay containing 1.5 to 2% nitrate to pregnant and non-pregnant mares resulted in clinically normal animals, even though higher than normal levels of nitrate were detected in blood samples. As a general rule, most horses should not be fed hay containing more than 1.5% nitrate. DHIA (320-352-2028), Dairyland (320-240-1737) and the

Minnesota Veterinary Diagnostic laboratory (612-625-8787) can test hay for nitrate concentrations. If forage contains between 1.5 to 2% nitrate, it should not be fed without diluting the forage with other feedstuffs (i.e. forages/grains lower in nitrate). If the forage is over 2% nitrate, it should not be fed at all. Nitrate exposure has also been associated with goiter (or hypothyroidism) because of the potential for nitrate to interfere with iodine. Offering iodized salt is the most practical prevention for goiter.

## Is My Barn Eco-Friendly?

By: Betsy Gilkerson, U of M

Many livestock owners are concerned about their affect on our environment and natural resources. It doesn't matter what kind of livestock you have. They all can be quite easy on our natural resources like our lakes and streams and forests. However, if the owner isn't careful livestock operations can be quite hard on our resources. Here is a quiz to determine how eco-friendly your livestock operation is.

### Livestock Exclusion- 3 points for each yes.

Y /N – Are your animals fenced 30-100 feet from ALL sensitive water features such as; well heads, creeks, streams, lakes, wetlands? (Ideally, they should also be kept off septic systems to prevent compaction and damage to the system.) Y /N – Is the area between the animals and the water

feature maintained in good vegetative cover like tall grass, not weeds? Trees and brush along surface water is encouraged.

### Nutrient Management-3 points.

Y /N – Is your animal's manure stored at least 150 feet from a sensitive water feature? Y /N –Is the manure stored on a cement pad or compacted clay, or removed and relocated semi-annually? Y /N – Is the manure utilized to prevent Phosphorus levels from getting too high? Y /N – Do you follow a manure management plan? Y /N –If you fertilize your lawn, are you using Phosphorus free fertilizer and keeping it away from sensitive water features? This includes driveways and roads.

### Clean Water- 2 points.

Y /N –Is clean water from the roof or the surrounding area directed away from the

manure pile and bare ground? Y /N – Is the stormwater from your property collected so it can infiltrate into the ground? This helps recharge our ground water.

### Erosion Control – 2 points.

Y /N –Are gullies on your property stabilized and controlled? Y /N –Is the amount of bare soil on the property minimized, possibly through pasture management? Y /N – Is the runoff from bare areas, including arenas, driveways and parking lots, filtered with a filter strip?

### Chemical Safety – 2 points.

Y /N – Do you follow the instructions on labels for dilution rates, application rates and storage for all hazardous chemicals like gasoline, pesticides, and fertilizers? Y /N – Do you dispose of these chemicals according to their labels? Y/N – Do you follow

University of Minnesota guidelines for applying pesticides and fertilizers? This includes following setback guidelines and ways to avoid spray drift.

### Wildlife Habitat Management- 2 points.

Y /N – Are noxious weeds and non-native invasive plants controlled on the property? We are required by state law to control noxious weeds like Canada thistle, Bill thistle, and purple loosestrife.

Y /N **Bonus Question- 5 points-** Do you plant native plants whenever possible?

Here is a break down of the scoring: Points Earned (46 possible): 0-20: poor; 20-30: moderate; 30-40: good; 40+, EXCELLENT. The questions with higher point values have a greater impact on our water quality. If you are looking for areas to focus, they are a good place to start.