



# U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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## Research Update: Cecal Impactions

Cecal impaction (a type of colic) can have life-threatening complications if not diagnosed and treated promptly. Researchers in Pennsylvania set out to evaluate short- and long-term outcomes after medical and surgical management of horses with cecal impaction and to determine reasons for death or euthanasia.

Data collected from medical records (1991-2011) of horses with a diagnosis of cecal impaction was conducted and included medical signs, history of recent disease and surgical procedures, admission data, management, complications, and final outcome. Short-term outcomes (alive or dead at discharge) and long-term outcomes (alive or dead at  $\geq 1$  year) were determined by telephone interview.

Of 150 horses hospitalized with a diagnosis of cecal impaction, 102 (68%) had a history of recent disease or a surgical procedure. Thirty-eight horses (25%) had cecal perforation at admission and 3 horses (2%) were euthanized

without treatment. Of 109 horses treated, 59 (54%) were managed medically and 50 (46%) surgically. The proportion of horses alive at hospital discharge was significantly lower for horses managed medically (61%) compared with surgically (82%). Fifty seven percent of horses managed medically were alive at 1 year.

The proportion of horses alive at hospital discharge was lower for both medically and surgically managed horses with cecal impaction compared to past reports. There was decreased survival for horses treated medically than those treated surgically.

Researchers recommend treating cecal impactions surgically rather than medically. However, 61% of horses managed medically survived. Horse owners should be aware of outcomes when selected a management method for horses with cecal impactions.

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

*Summarized by Krishona Martinson, PhD, University of Minnesota*

## Options for Disposal of Equine Carcasses

Proper disposal of animal carcasses is an important part of preventing the potential spread of disease and protecting air and water quality. Unless slaughtered for human consumption, animals that die need to be disposed of within 72 hours.

Minnesota horse owners have options for disposal of a carcass. The State of Minnesota regulates these options and involves the Departments of Agriculture, Natural Resources, Pollution Control Agency (MPCA), and Board of Animal Health (MBAH).

The legal options for disposing of horse carcasses in Minnesota include

burial, composting, incineration, and rendering. Carcasses must be buried 5 feet above the season-high water table and not in soils that are within 10 feet of bedrock. When composting, the carcass must be completely covered by a carbon source (i.e. sawdust) and monitored for temperature, oxygen level and moisture. With incineration, carcasses must be incinerated in a MPCA approved incinerator. Vehicles that haul carcasses for rendering services need to be inspected and permitted by the MBAH.

For more information on carcass disposal in MN, visit the MBAH [website](#).

### Inside This Issue

Research Update: Cecal Impactions	1
Options for Disposal of Equine Carcasses	1
Ask the Expert: Moldy Hay	2
Questions to Ask When Purchasing Hay	2

### Upcoming Events

#### Equine Pasture

#### Management Program

One farm visit and a customized pasture and grazing management plan. April 1 through August 1. \$650 per farm.

To register:

[www.regonline.com/EquinePastureManag2015](http://www.regonline.com/EquinePastureManag2015)

#### 6th Annual Horse Forage Field Day

Thursday, August 20  
6:30 to 8:00 pm  
St. Paul Campus  
\$15 per person

To register, visit:

[www.regonline.com/HorseFieldDay2015](http://www.regonline.com/HorseFieldDay2015)

#### Lunch and Learn Webinar

September 15, 2015

Noon to 1 pm (central)  
“Preparing and Managing Arena Footing” presented by Dr. Ann Swinker, Penn State University  
To join, click [here](#).

Visit our [Facebook](#) page for “Weed of the Week Monday”, “Tip of the Week Wednesday”, “Friday Funny” and other events.

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## Ask the Expert: Moldy Hay

By: Krishona Martinson, PhD, University of Minnesota

**Question:** I recently purchased hay that feels a little moist but its not hot. After a week, if its not hot, will it still get hot or moldy? How will I know that the hay is good?

**Response:** Hay typically goes through a curing process after harvest and the temperature inside the bale usually peaks between 11 and 14 days after baling. Its common for hay to be warm to the touch during this time; however, hay should never feel hot.

Most mold is directly related to moisture at the time of baling (poor storage conditions can also lead to

mold). Small square-bales baled at less than 16% moisture will rarely mold, while hay baled at greater than 18% moisture will likely mold. Hay baled between 16 and 18% moisture is a gray area and can either mold or be good quality.

To determine moisture, you should take a forage sample with a forage probe. You may be able to borrow a forage probe from a local feed store or Ag Coops. Many commercial feed companies that sell horse feed also offer hay testing services. Core about 10% of the bales in your load and submit it to a commercial forage testing lab.

Ensure the lab has a forage analysis for equine digestible energy so the resulted are useful to your horse (vs. a cow or other livestock). The resulting hay analysis will tell you the percent moisture of your hay.

Alternatively, you can wait a minimum of 14 days and then open several bales. If the opened bales appear to be good quality and have not molded, the hay should be suitable for your horses. If properly stored, the hay should remain good quality throughout the year. If the bales are moldy or dusty, then return the load (if possible). Moldy hay should never be fed to horses.

## Questions to Ask When Purchasing Hay

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

Hay is the most expensive component in most horse diets. Buying good quality hay lead to financial savings and improved horse health. Here are some questions horse owners should ask when purchasing hay:

1. Have you sold to horse owners before or do you specialize in horse hay? Horse are more susceptible to mold and some weeds compared to other livestock. Horse hay suppliers tend to have experience in baling hay for horses.
2. What is the average weight of the bales? Very important if buying hay by the bale.
3. What crop/cutting is the hay? Helps indicate maturity and quality, but not critically important. To reduce the risk of weather-related issues, horse owners should buy some hay from each cutting.
4. What species are present in the hay? Legume and grasses have different nutrient values. For example, a mature grass hay is best suited to adult horses at maintenance while legume hay is best suited for performance horses.
5. Where was the hay harvested? Rule out ditch hay. Ditch hay has a greater risk of being contaminated with weeds and garbage.
6. Was the hay rained on? Rained on hay is a good choice for horses with metabolic problems; it tends to be lower in water soluble carbohydrates. Hay that is rained on soon after cutting will have less losses in forage quality compared to raked hay.
7. Was the hay stored inside or under cover after baling? Hay stored inside or under cover has less storage loss. Storage and feeding losses can be as high as 50%.
8. Was the hay field fertilized and/or sprayed for weeds or insects? Shows good management and likely a better quality product.
9. What are the payment options? Most hay producers require payment at the time of delivery.
10. Is delivery available and what is the cost? Finding a local hay supplier will save on trucking.
11. What is the price of the hay? Is there a reduction for volume or cash?
12. Is assistance available with onsite handling and stacking of hay, and if so, at what cost?
13. Is storage an option? If so, what is the cost? Most horse owners do not have enough onsite, inside hay storage.
14. How much hay do you have/bale each year? Helps ensure a consistent supply of hay. Changing of any feed, including hay, should occur gradually and over several weeks to reduce the risk of colic and digestive upset.