



U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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Gastrointestinal Parasites By: Jeremy D. Frederick, DVM, U of M

Parascaris equorum (Round worms) usually appear in horses 3-9 months of age. Foals will have a decreased appetite, slow growth rate, and sometimes a dull dry hair coat and potbelly appearance. A veterinarian or diagnostic laboratory can find eggs in the horse's feces. Treatment with Pyrantel pamoate (Strongid T) or Fenbendazole (Panacur) will kill the adult worms. If a heavy burden is suspected, Fenbendazole is the more appropriate choice. Ivermectin and Piperazine can be used to kill the larval stages of the worm. **Strongylus vulgaris** infects the cecum and ventral colon of the horse. When large numbers of larvae invade the intestine, the horse may become clinically sick showing signs of fever, diarrhea, inappetence, weight loss, colic and eventually death. With chronic infections, intermittent recurrent colic is a major indicator of disease. This parasite can be diagnosed on fecal flotation tests and is best treated with ivermectin (Eqvalan) and moxidectin (Quest) for the larval stages, and oxibendazole (Anthelcide), fenbendazole (Panacur), or pyrantel pamoate (Strongid T) for adults. **Cyathostome** forms cysts in the wall of the cecum and colon. As

they emerge, they damage the lining and cause inflammation which can interfere with digestion and absorption of nutrients. The horse may show clinical signs including: anorexia, weight loss, diarrhea and colic. Severe emaciation can result with long term infections. This parasite can be diagnosed on fecal flotation tests and can be treated with ivermectin (Eqvalan), oxibendazole, pyrantel pamoate (Strongid T), and piperazine for the adults and ivermectin (Eqvalan), moxidectin (Quest) or pyrantel tartrate (Strongid C) for larvae. **Anoplocephala Perfoliata** (Tapeworm) live at the end of the small intestine and in the large colon. Can be present in any age horse over 6 weeks of age and is usually asymptomatic (no visible signs). The horse may have a slower growth rate or seem to lose condition, and in some cases diarrhea and colic can occur. Portions of the worms may be visible by the naked eye in the horse's feces. This parasite is diagnosed with a fecal examination. Treatment consists of twice the normal dose of pyrantel pamoate (Strongid T). **Gasterophilus** (Stomach Bots) is often asymptomatic, however can cause lesions in the mouth, esophagus and stomach which may make the horse reluctant to eat.

Treatment with ivermectin (Eqvalan) or moxidectin (Quest) is recommended. **Oxyuris equi** (pinworms) can affect all ages of horse. The most noticeable clinical sign will be anal itching. The animals will be restless and not eat properly, and a yellow/gray discharge may be noticed coming from the anus. This worm can be diagnosed by examining the discharge for eggs or "trapping" the worm with scotch tape. Fenbendazole (Panacur), oxibendazole (Anthelcide), pyrantel pamoate (Strongid T), piperazine and ivermectin (Eqvalan) against adults. In foals fenbendazole should be the drug of choice. **Strongyloides westeri** (Threadworm) usually seen in young foals between 10 days and 6 months. The worms cause inflammation, edema and erosion of the small intestinal lining which can result in impairment of digesting and absorption of nutrients. Poor growth, depression and mild diarrhea can be present. The infection can be diagnosed by a standard fecal flotation test. The foals ingest this through the mare's milk, so treating the mare with ivermectin (Eqvalan) within one week of foaling will reduce infection. The foal should be treated with oxibendazole (Anthelcide) or ivermectin (Eqvalan) if this worm is suspected.

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Conservation Workshop Series for Livestock Owners

Corcoran City Hall
7:00 to 9:00 pm

July 19: Mud & Erosion Control

August 16: Native Plants and

Rotational Grazing Workshop

Greenfield, MN

Tuesday, September 19

6:30 to 9:00 pm

Contact Betsy at

612-596-1175 for more info

Plants Poisonous and Harmful to Horses Poster Available

2' x 3' poster identifying 22 plants. Cost: \$25.00

Contact Krishona for more info at 763-767-3842 or

bjork026@umn.edu





Storing round bales outside on the ground is a very common practice and represents the most economical method of hay storage. However, it also has the greatest potential for loss due to weather. Round bales typically have a higher storage loss than small square bales, especially when stored outdoors. Studies have shown outdoor storage losses range between 5 and 35 percent depending on the amount of precipitation, storage site location, and original condition of the bale. Most of the losses that occur during outside storage take place on the

Storing Round Bales Outside

By: Krishona Martinson, PhD, U of M

bottom of the bales where moisture levels remain highest and air movement is the lowest. There are a number of storage techniques that minimize outdoor storage loss. **One**, make/buy a dense bale as they will sag less and have less surface area in contact with the ground. A dense surface layer will shed more precipitation and protect the inner part of the bale from weathering. **Two**, use plastic wrap, net wrap or plastic twine. Studies show that net wrapped bales reduced grass hay dry matter losses by 32 percent compared with twine bales

stored outside. Plastic twine will resist weathering, insects and rodents better than natural fiber twines. Twine should be wound tight and spaced 6 to 10 inches apart for best bale storage. **Three**, store bales on a well drained location. Bales soak up moisture if placed on a wet or poorly-drained site. A well drained, four to six inch coarse rock base will minimize bottom spoilage, as well as using wooden pallets. **Finally**, never store bales under trees. It is highly recommended that bales that are stacked

outside, have some type of temporary cover placed over them (i.e. a tarp) for the total duration of the storage period. Remember that the outer 4 inch layer of a 6 foot diameter round bale contains about 25 percent of the total bale volume and is most likely to be damaged by weather if stored improperly or unprotected. Storage losses are usually reduced by approximately two-thirds with indoor storage and by one-half with good plastic covering (i.e. a tarp) outdoors.

Horses require a clean, fresh supply of water at all times. Adequate quantities of water are necessary for the horse's normal metabolism and propulsion of feedstuffs through the gastrointestinal tract. If the horse does not consume sufficient quantities of water, the results can range from impaction of feedstuffs in the intestine to dehydration. A 1,000 pound horse, at rest in a

The Importance of Water

By: Marcia Hathaway, PhD, U of M

cool climate, eating a normal diet of good quality dried roughage will normally drink from 8 - 10 gallons of water a day. If the horse is turned out on pasture the water content of the fresh forage will meet some of the horse's requirements, but not all. Young horses, pregnant or nursing mares need additional quantities of water. With increased temperature, humidity and/or exercise, voluntary water consumption can

increase 2 - 4 fold. A horse that is working hard in a hot environment can lose up to 2 - 4 gallons of sweat/hour with a total loss of as much as 10 gallons of sweat. Because of the composition of horse's sweat, even though there has been a loss of a lot of water, the horse may not necessarily be thirsty i.e., the basis for the phrase: "You can lead a horse to water but you can't make him drink". You should however encourage

water consumption by a horse that is sweating extensively. Voluntary water consumption is enhanced when the water offered is clean and between 45 - 64° F. A horse that is working should be allowed sufficient opportunity to drink every couple of hours. Although it is a commonly held belief that a hot horse should have water withheld until it is cool, there is no scientific basis to support that belief.

Additional Water Tips

By: Jennifer Johnson, DVM, U of M

Several of you have asked for tips on getting your horse to drink water while away from home. Below are some helpful hints: A 1000 pound horse should drink about 8-10 gallons of water a day. However, when horses are traveling, or in a strange environment, they may not drink enough water to meet their daily requirements. Also, a horse will need more water when it's hot, or if they are exercising. Some consequences of dehydration can include poor performance, organ dysfunction and colic. When traveling for vacation or show, here are some tips to encourage your horse to drink:

1. Take water with you from home;
2. Add 20 ounces of clear soda to new water;
3. Add electrolytes to new water;
4. Carry electrolyte gel/paste and administer as needed;
5. Add a small amount of salt to grain;
6. Wash buckets with a little added listerine – horses like the minty taste!