

PARASITE CONTROL IN HORSES

KEYS TO PARASITE MANAGEMENT:

1. Individualize your horse's deworming
2. Perform appropriate testing to ensure dewormer is effective
3. Manage pasture to reduce parasite burden in environment
4. Administer final deworming of the year after the first hard frost



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KEEP UP-TO-DATE ON CHANGES IN DEWORMING RECOMMENDATIONS

For many years, horse owners treated their horses for intestinal parasites with either daily dewormers or rotating dewormers every other month. The goal was the complete removal of any intestinal parasites from the horse's gastrointestinal tract (especially large strongyles, or nematodes related to the hookworm, that caused severe disease in horses). This seemed like the perfect solution; however, deworming horses in this manner is not a benign treatment. Just as we have learned that antibiotic use has promoted bacterial resistance—parasites are becoming resistant to dewormers. This has important implications for our horse companions, as the available dewormers become less and less effective.

Did you know 20-30% of horses supply 80% of the total parasite burden in the environment?

Your horse is an individual; a deworming schedule should be made to fit their particular needs and lifestyle. A horse that is stalled encounters different risks than a horse that is pastured year-round. Your horse deserves the best, and we can help you create an appropriate deworming schedule tailored to your horse's and your farm's needs.

How do I know when to deworm my horse?

The first step to creating your horse's deworming schedule is to determine their shedding status. Horses can be split into three categories: low, moderate, and high shedders. Low shedders are able to control their parasite burden appropriately

with their immune system; therefore, they only need to be dewormed twice a year. Moderate and high shedders need more dewormings to adequately treat them. Shedding status can be determined with a Fecal Egg Count test, which should be performed first as a weanling and then yearly to monitor for changes in your horse's status. This is especially important as your horse ages and their immune system changes.

*There is no such thing as cookbook deworming programs anymore.
Your horse is an individual and should be treated as one!*

How do I know which dewormer to use?

Once your horse's shedding status is determined by a Fecal Egg Count test, we can help you determine when to deworm your horse. After a dewormer is administered, a Fecal Egg Reduction test can be performed.

Two weeks following the first deworming of the year, a second Fecal Egg Count test can be performed. An appropriate dewormer for your horse is one that kills 90% or more of parasites within two weeks of treatment. If not, the parasites may be resistant to that dewormer. If a resistant parasite is present on the farm, all of the horses will be exposed to it; therefore, if you have more than one horse on your property, the Fecal Egg Reduction test does not need to be performed on each individual horse.

COMMON PARASITES

Strongyle (large and small) have played a large role in equine parasitic disease. Historically, the large strongyle parasites caused severe disease in horses leading to the overuse of dewormers. Small strongyles, however, have made an insurgence in the horse population. These parasites have become increasingly resistant to common dewormers due to their shorter life cycle. Other parasites that can affect horses include ascarids (roundworms), pinworms, tapeworms, and bots. Ascarids are important to diagnose in horses under one year old as they can cause ill thrift. If there is a high ascarid population in a young horse, a rapid die-off from a deworming can lead to impaction and colic. Please contact us for deworming recommendations for your young stock to protect them against heavy ascarid infestation. In older horses, the presence of other parasites on the Fecal Egg Count test will alter treatment recommendations.

PRODUCTS ON THE MARKET

The most common dewormers are ivermectin- and moxidectin-based products, which afford broad-spectrum coverage and low levels of resistance. Routine Fecal Egg Counts and Reduction tests will be important to ensure parasites do not become resistant to these important dewormers. Other dewormers on the market include pyrimidines, benzimidazoles, and praziquantel (see table below for brand names). Praziquantel targets tapeworms and should be utilized in the fall after the first hard frost. We can help you determine the best dewormers for your horse based on the results of the Fecal Egg Count.

Chemical Class	Drug Name	Brand Name	Additional Notes
Macrocyclic Lactones	Ivermectin	Zimecterin	
		Rotectin 1	
		Equimectrin	
		Eqvalan	
		Ivercide	
	Moxidectin	Quest	Kills encysted small strongyles, but should NOT be utilized in horses under six months of age.

Pyrimidines	Pyrantel Pamoate	Strongid Paste Rotectin 2	
	Pyrantel Tartrate (daily)	Strongid C Strongid C2X	
	Pyrantel Tartrate (single)	Manna Pro Kaeco	
Benzimidazoles	Fenbendazole	Safe Guard Panacur	Double-weight dose given once daily for five consecutive days will kill encysted small strongyles.
	Oxibendazole	Anthelcide	
	Oxfendazole	Equicide Benzelmin	
Pyrazines	Praziquantel	Equimax (+ivermectin) Zimecterin Gold (+ivermectin) Quest Plus (+moxidectin)	

Alternative remedies such as diatomaceous earth have not been proven effective parasiticides for horses. Appropriate use of dewormers is important for reducing parasite burdens.

PROTECTING YOUR HORSE FROM PARASITES IS ABOUT MORE THAN DEWORMERS!

Environmental management is key to reducing the parasite burden present on the pasture. Parasite eggs love moderate temperatures and moisture to hatch into larvae and develop until they are infective to horses. A cool environment does not allow parasites to develop, and excessive heat will kill them. Since the eggs are passed in feces, proper management of manure is key to reducing the parasite burden. Here are some ways in which you can protect your horses:

1. Proper composting produces enough heat to kill any parasite larva present. If you are interested in composting, the MSU Extension has excellent resources. For more information, visit http://msue.anr.msu.edu/topic/info/soils_composting
2. If you spread manure on your pasture, ONLY do so on a hot, dry day. Spreading manure during moderate temperatures and humidity will only allow those parasites to flourish; however, spreading manure on a hot, dry day will desiccate any eggs. It is best to use composted manure on your pasture!
3. Proper pasture management and rotational grazing is key! MSU Extension has excellent resources available at the following

Refugia – why some parasites are good!

Refugia is a term to describe the portion of a population (or stages of parasites) that are not involved in selection for parasite resistance. These include parasites on the pasture and stages that do not respond to dewormers. It is important to allow an adequate level of refugia in your horse and on your farm. It may seem counterintuitive, but since this group does not respond to the dewormer given to your horse, they do not become resistant. A larger population of susceptible parasites than resistant will allow the dewormer used on your farm to continue to work

to protect your horse.

URL:http://msue.anr.msu.edu/news/rotational_grazing_systems_for_horses . Also feel free to contact us if you have any questions about improving your rotational grazing.

4. Deworm at the appropriate times of year, i.e., in the middle of an Upper Peninsula winter is not the time to deworm. Deworming should be performed when environmental conditions are optimal for parasite development, thus decreasing parasite contamination on the pasture.

WHEN SHOULD I SUBMIT A SAMPLE FOR A FECAL EGG COUNT?

It is important that a Fecal Egg Count test be performed for your horse at the appropriate time. Because dewormers can affect the results of a Fecal Egg Count, the ideal time for this test is in the spring--April or May--prior to the first deworming of the spring. Parasite transmission decreases in the winter, making it difficult to get an accurate count

If you would like a test performed after the first deworming of the year, make sure you submit your test after an appropriate amount of time. If you used a moxidectin product, you need to wait 16 weeks before collecting a fecal. For an ivermectin product, you must wait 12 weeks, and for a benzimidazole or pyrantel product, you must wait nine weeks.

When you collect a fecal sample for us, please follow these guidelines:

1. Only a small sample is required--one to two fecal balls from the center of the manure pile is adequate.
2. Store the sample in an airtight, leak-proof container or plastic bag.
3. The fresher the sample, the better--if it cannot be submitted right away, refrigerate (do not freeze) until submission. If appropriately stored, the sample can still be read up to seven days after collection.

It is important to monitor the shedding statuses of young horses (under 5 years) and senior horses (over 15) annually due to their changing immune systems. Adult horses (5-15 years) tend to stay consistent with a shedding status, but we still recommend an annual Fecal Egg Count. This test not only ensures that they have not changed shedding status, but can also provide early clues should the dewormer used on your farm become less effective. It is important that your horse is adequately dewormed to protect them against disease.

IN CONCLUSION

Recommendations for deworming your horse have changed dramatically over the past few years. Our veterinarians and staff at Copper Country Veterinary Clinic are here to help you stay up-to-date with the most recent recommendations. We can also direct you to good resources to learn more.

If you have any questions or would like more information on the Fecal Egg Count test, please call us at 906-482-1771 and Dr. Rebecca Vollrath will be happy to help you.

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