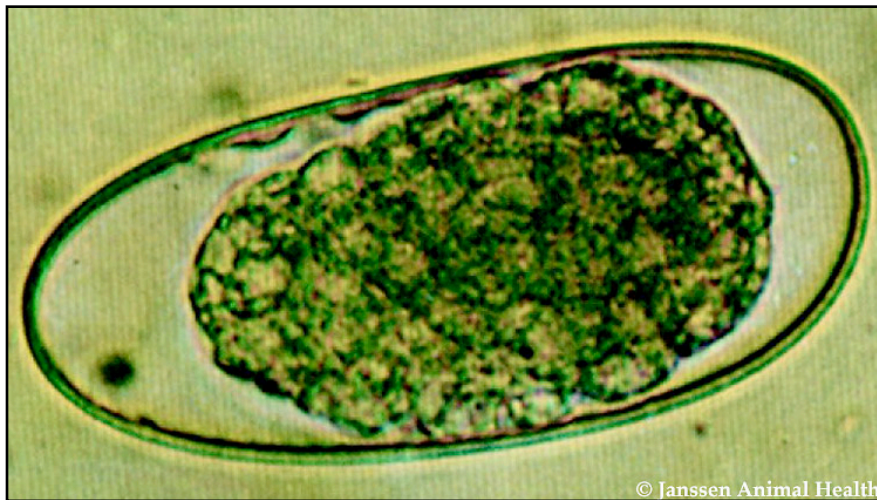


Updated Deworming Recommendations

A new method to prevent resistance.

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Resistance to deworming medications is becoming increasingly prevalent. There are no new medications on the horizon, so new strategies of deworming herds of horses have been investigated. Kansas State University veterinarians recently attended the 2009 annual conference of the American Association of Equine Practitioners (AAEP) in Las Vegas, NV. At the conference, they learned a new schedule of

deworming tailored to the specific needs of your farm. Those recommendations are included in this article. We hope that this information will give horse owners an arsenal against intestinal parasites that will reduce resistance, reduce the number of parasites on the farm, and, as a result, improve the health and well-being of your horse.

Foals...

While intermittent deworming is adequate for adult horses, the immune system of foals is not quite ready to handle intestinal worms on its own. We recommend a deworming program starting at 30 to 60 days of age and continuing every other month until the foal is at least 18 months. An example deworming strategy includes ivermectin, pyrantel, and double-dose fenbendazole in a rotational schedule. This should ensure that your foal is parasite-free. Fecal egg count reduction tests are important to determine resistance. Remember that moxidectin should not be used in foals less than 6 months of age. Your veterinarian will provide essential advice for what will be best for your foal.



NOT EVERY HORSE NEEDS TO BE DEWORMED EVERY TWO MONTHS...

In the past, it was commonplace to automatically deworm horses every two months. This approach has been one reason why we have seen resistance in some herds to the common anthelmintics available. In order to fully understand the deworming strategies available to your herd, a few basic questions must be asked:



- 1) Which anthelmintic is still effective on your farm?
 - 2) Which individual horses on your farm require minimal, moderate, or intensive control measures?
 - 3) What intervals or timing of deworming is appropriate for controlling the parasites in the classes of shedders you have on your farm?
- The answer is simple: **Fecal Egg Count Reduction Tests.**

IDENTIFICATION OF LOW, MEDIUM, AND HIGH SHEDDING ANIMALS IS PARAMOUNT

Fecal egg count reduction tests are simple to perform. Your veterinarian can help you submit the samples to the Kansas State University Diagnostic Lab (more information at <http://www.vet.k-state.edu/depts/dmp/service/index.htm>). If you have a large number of horses, batching the samples can be performed to reduce cost. Ideally, fecal egg counts should be performed on all horses greater than 3 years of age on your farm. The feces should be submitted for a “quantitative” examination, one where the number of eggs per gram (epg) of feces is counted. Horses with a fecal egg count of <200 epg are considered low contaminators, horses with fecal egg counts of 200-500 epg are considered moderate contaminators, and horses with fecal egg counts of >500 epg are considered high contaminators. After deworming with an appropriate anthelmintic, a certain amount of time is required before starting the reduction test. If you use a benzimidazole such as fenbendazole (SafeGuard® or Panacur PowerPac®) or a pyrimidine such as pyrantel (Strongid®), waiting approximately 6 to 8 weeks to start testing is

recommended. Ten to 12 weeks is sufficient after an ivermectin and/or praziquantel compound. After the recommended period of time has elapsed, fecal egg counts should be performed on all horses on the farm. Deworm your horses with an anthelmintic. After two weeks, a fecal egg count should be performed again. If there is no resistance, a reduction of 90-95% of the egg count should be seen within that period of time. If you do not see this significant decrease, the worms on your farm are resistant to that medication and that medication should not be used on your farm. Fecal egg count reduction tests should be performed intermittently after different types of anthelmintics to evaluate efficacy.



AN EFFECTIVE PROGRAM IS MORE THAN JUST TIMING...



Not only is the timing of the deworming an important part of the anthelmintic strategy, pasture management, maintaining the anthelmintic efficacy, and proper dosing are all essential components to keeping your herd

as healthy as possible. Horses in large pastures tend to keep feeding areas and toilet areas separate, reducing contamination. However, if your pasture must be dragged or harrowed, it should be done during the hottest months of the year and should be left vacant for several weeks thereafter. In cooler regions, harrowing at the end of grazing season helps to reduce the overwinter survival of some parasites.

Storage of anthelmintics is important. Please read and follow the labels of each drug carefully to

ensure the drug has not lost its effectiveness due to freezing or overheating.

If possible, weigh your horse or measure with a weight tape. Underdosing is common and is a definite component to developing anthelmintic resistance.



KANSAS STATE UNIVERSITY VETERINARY MEDICAL TEACHING HOSPITAL

The veterinarians at Kansas State University Veterinary Medical Teaching Hospital are committed to the health and well-being of your horse. Please call 785-532-5700 if you have questions about preventive care such as vaccinations, deworming, and dentals.

EXAMPLE ADULT DEWORMING SCHEDULE

Shedding risk	March	May	June	July	September	November
Low Or Or	Iv-P				Mx-P	
	Mx-P				Iv-P	
	Iv-P	BZD/PYR			Mx-P	
Moderate Or	Mx-P		BZD/PYR		IV-P	
	Iv-P	BZD/PYR	Iv/Mx		Mx-P	
High	Mx-P		BZD/PYR	Ivermectin	IV-P	Ivermectin

Iv = ivermectin; P = praziquantel; Iv-P = ivermectin + praziquantel; Mx = moxidectin; Mx-P = moxidectin + praziquantel; BZD = benzimidazole; PYR = pyrimidine.

Examples of dewormers by class:

Ivermectins/Moxidectin/Praziquantel: Eqvalan®, Quest Plus®, Zimectrin Gold®.

Benzimidazole: Panacur PowerPac®, Safe-Guard PowerDose®

Pyrimidine: Strongid®



Reference: Reinemeyer, CR. Controlling strongyle parasites of horses: a mandate for change. AAEP conference proceedings, 2009.

AN EFFECTIVE DEWORMING STRATEGY IS MULTIFACETED

Deworming foals more frequently

Choosing which horses require deworming more frequently

Fecal Egg Count Reduction Tests

Pasture management

Proper dose

Proper storage of anthelmintic