The New Equine Deworming Rules

Scrap your outdated rotational deworming program and update to the new parasite protection plan for your horse.

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August 24, 2015

Deworming used to be a no-brainer. You picked up a tube of paste dewormer at the feed store, gave it to your horse and jotted the date on your calendar. A couple months later, you did the same thing, making sure to use a different type of dewormer. You did this year-round and felt sure you’d covered all the bases and your horse was protected from all types of potentially damaging internal parasites.

Was he? Maybe, maybe not.

The vast majority of horse owners continue to deworm following this outdated protocol, simply rotating between different dewormers.

Now that parasite resistance to anthelmintic (deworming) drugs has become prevalent, many of the rules about deworming have changed. And if you’re not changing with them, you could be doing your horse a huge disservice.

So how do you know what kind of deworming program is best for your particular horse? That depends on several factors. First of all, what age of horse are you treating? Foals and young horses have different deworming concerns than adult horses and require more frequent deworming. (See “Deworming Foals” below.) For adult horses age 3 and up, you’ll need to develop a customized plan based on the individual horse’s parasite load. Here’s how to create your horse’s deworming program.

Deworming Adult Horses

The good news is, you’ll probably be deworming less than before.

“All adult horses need at least two dewormings per year, primarily targeting the small strongyle and Habronema in the spring, and encysted small strongyles, tapeworms and bots in the fall,” says Nathan Voris, DVM, MBA, a senior veterinarian who works in Equine Technical Services at Zoetis, a global company that develops and manufactures animal health medicines and vaccines.

“The reason for the minimum two treatments per year is to protect against re-establishment of the large strongyle, which has a minimum six-month life cycle. Historically, this parasite was the cause of many fatal colics prior to ivermectin and moxidectin. If ivermectin or moxidectin are used twice per year, they will effectively eliminate the risk of this parasite from the herd.”

In some regions, horses may only need a minimum of one deworming annually, but Voris finds it’s best to recommend twice a year treatments.

Keep in mind that some horses will need more than two dewormings each year, and these should be based on fecal testing (see below), as well as risk factors. For example, a horse that is pasture boarded at a stable with lots of horses coming and going can have significant exposure to parasites.

Horses that are determined by fecal testing to be “high shedders” need to be dewormed more than twice a year. These horses tend to be more susceptible to parasites and carry a heavier parasite load. They then shed greater numbers of parasite eggs in their manure, which can be potentially transmitted to other horses on the farm grazing in the same fields.

High shedders are responsible for the majority of parasite transmission. Identifying and treating these horses can help protect the rest of the herd from parasite exposure. “Usually in a herd, 80 percent of the parasite burden is hosted by 20 percent of the horses,” says Voris. Fecal Testing

Fecal egg counts (FEC) will tell you if your horse is a high or low shedder. Fecal egg count reduction testing (FECRT) can identify the drug classes to which worms are susceptible or resistant.
The American Association of Equine Practitioners (AAEP) recommends the first FEC at 6 months of age," says Voris. "All adult horses should have at least one FEC per year. The ideal time to do this is during the grazing season, when the grass is growing. More frequent FECs should be considered to monitor high shedders or horses exhibiting clinical signs of disease caused by parasitism."

Testing after the most recent deworming treatment is also critical, as this will tell you if the drug you used is effective. FECRTs are performed by collecting a fecal sample for an FEC at the time of deworming and again 10 to 14 days after deworming. The number of eggs per gram (EPG) of feces after deworming is compared with the EPG prior to treatment. This lets you know if the dewormer you're using is effective or if parasites are showing resistance to it. Your veterinarian can go into more detail, but if there is resistance, this means you shouldn't use that class of deworming drug against that targeted parasite on that farm ever again.

Your veterinarian will run the tests or refer you to a lab that can. Collect a small amount of fresh manure (a few "apples" are enough) in a resealable plastic bag. Immediately refrigerate or put it in a cooler with ice if your vet isn't coming for a few hours to keep any eggs from hatching and compromising the test. Your veterinarian can explain the test results, as well as let you know which category (high or low shedder) your horse is in, so you know how frequently to deworm.

In a herd, 80 percent of the parasites are carried and transmitted by 20 percent of the horses. These horses can be identified through fecal testing and will need to be dewormed more frequently.

Treatment Plan

Small strongyles are the primary parasites of concern when treating adult horses, but not all dewormers work against them. For example, the chemical class that controls roundworms often is completely ineffective against small strongyles, and vice versa. In addition, some parasites have developed resistance to certain deworming drugs. So how do you know which dewormer to use? Time for a little label reading the next time you visit the feed store. There are three basic chemical classes of deworming products: benzimidazoles (fenbendazole, oxibendazole); tetrahydropyrimidines (pyrantel salts); and avermectin/milbemycins (ivermectin and moxidectin). Avermectin/milbemycins are also referred to as macrocyclic lactones.

Another drug, praziquantel, is marketed in combination with the macrocyclic lactones to treat tapeworms. "Benzimidazoles are best for roundworms," says Voris. "Macro cyclic lactones are best for small strongyles and the only class with efficacy against Habronema and bots."

Tapeworms are only killed with dewormers containing praziquantel. Because of widespread benzimidazole resistance, moxidectin is the only anthelmintic with continued efficacy against the encysted larval stage of small strongyles.

"Fenbendazole is ineffective against small strongyles to the point that it probably should not be used in adult horses," says Voris. "Fenbendazole and oxibendazole are still very effective against roundworms (ascarids), and are still good choices for use in foals. Ivermectin and moxidectin are still very effective against small strongyles, but there has been documentation of resistance in the roundworm making them less ideal for foals and weanlings."

Deeworming Foals

The rules are completely different for foals compared to mature adult horses. Because of their susceptibility to infection by internal parasites, foals need to be dewormed at least four times during their first year.

"Foals should be first dewormed at 2 to 3 months of age with an anthelmintic effective against ascarids (roundworms)," notes Nathan Voris, DVM, MBA.

"The benzimidazole class of dewormers (fenbendazole and oxibendazole) is the chemical class of choice for foals due to both efficacy against roundworms and mode of action in killing parasites; they do not paralyze the worm," he adds.

You'll want to deworm your foal at least four times before he turns one year old. These dewormings should mainly target roundworms (ascarids), but in the late fall, remember to use a product that targets small strongyles and tapeworms. "Most foals develop pretty solid immunity by 6 to 8 months of age, so treatments between weaning through 1 year of age could be based on diagnostic results [see section on fecal testing, pg. 47]," says Craig R. Reinemeyer, DVM, Ph.D., Dipl. ACVM, a veterinary parasitologist and president of East Tennessee Clinical Research, Inc.

"Until a horse is about 18 months of age, the roundworm is still a risk, so we must treat accordingly using benzimidazoles," notes Voris. "Small strongyles will replace roundworms as the parasite of primary concern in horses older than 18 months."
Horses age 3 and younger are considered at high risk of parasite infection, so they need more frequent deworming than older, mature animals. Plan on deworming three to four times a year through the young horse’s third year.

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This article originally appeared in the April 2015 issue of Horse Illustrated magazine. Click here to subscribe!