Foundation Equine
Wellness and Performance
• VETERINARIANS •

Deworming: The Principles

We used to think of deworming as easy. There were only two rules. 1) Deworm every horse every 60 days and 2) Use a different dewormer than you used last time. Simple, easy to remember and **wrong**. That guideline is about 30 years old and parasitologists stopped recommending it about 20 years ago, although no one (including veterinarians) heard the message. The problem is that there are only 3 classes of deworming drugs (although they are available in dozens of brand names) and there has not been a new dewormer in about 25 years. Furthermore, there is nothing new on the horizon. We are probably stuck with the drugs we have for a long time, and those are becoming less and less effective as parasites build up resistance.

Parasite resistance has become a huge problem. It has been estimated that nearly all the small strongyles (the main parasite of adult horses) are resistant to one of the three classes of dewormer, and 50% of strongyles are resistant to two of the three. That doesn't leave us with a lot of options. That is also why random rotation of drugs is no longer acceptable. When you rotate, you are following an effective dewormer with one or possibly two ineffective dewormers. You are also giving the parasites a chance to develop resistance to all of your weapons.

The way we think about parasite control now is with a new goal: instead of removing parasites from inside your horse, we remove them from the environment. Most parasites are spread on pastures, not in stalls or dirt paddocks which are far too hostile to parasite eggs. A clean, well-bedded stall is too dry for eggs to develop and the urine and ammonia in a dirty one quickly kills any eggs. Manure management techniques are key in our new goal of parasite control, and worms haven't developed resistance to management techniques. These include all of the things you may have been hearing: don't overcrowd pastures, deworm new horses before adding them to the herd, rotate pastures whenever possible, and rotate horses with other livestock (cattle and horses "clean up" the other species' parasites, but are immune to them). In fact, one study in England showed that removing manure from the pasture twice weekly was more effective at controlling parasites than any deworming schedule.

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So if rotation is not an option and frequent treatment is discouraged, how the heck DO you deworm? Well, you start at the beginning. Do a fecal test. Fecal testing is the most important weapon in parasite control. Testing lets you identify which parasites are present in undesirable levels in which horses. With that information you have a better chance of choosing an effective deworming program. In most cases and for the majority of back yard horses, twice-a-year deworming provides effective parasite control.

Fecal testing does have its limitations. Regular fecal tests do not detect bots and only intermittently find tapeworms. However, it is highly effective at detecting levels of strongyles, round worms, and pin worms. The sample must be handled properly prior to testing. Collect a golf-ball-sized sample of fresh, moist manure. (Samples should be less than 24 hours old, that dried up fossil in the corner of the stall is useless.) Put it in a zip lock bag and squeeze out all the air, seal it up, then keep it refrigerated until its turned in for testing.

See our handout, **Deworming: The Protocols** for more information on recommended deworming protocols.

Did you know….

1. Horses don't get parasites from eating fresh manure. Parasites are not infectious when manure is first passed. Eating fresh manure will give your horse bad breath and no friends, but not worms.

2. Many parasite eggs can survive freezing temperatures for 6-12 months. However, below 45 degrees, the parasites slow down so much that they are considered non-infective. The point: most winter deworming is unnecessary. Let Mother Nature take care of the problem for free.

3. Horses exhibit a fecal avoidance behavior. Given enough pasture, they form 'roughs' (long grass) and 'lawns' (short grass). They poop in the 'rough' and graze in the 'lawn'. If overcrowded, they disregard this behavior and can end up grazing near old, infective, parasite-laden feces.

4. Harrowing or dragging mixes Roughs and Lawns and forces horses to consume more eggs. Dragging is an excellent idea, but should be done in late spring and early autumn (when temperatures are above 85 degrees) and then the field should be left vacant for 3-4 weeks for the eggs and larvae to die.

5. If you really want to limit parasite resistance, moxidectin (Quest) breaks down once it leaves the horse's body, but ivermectin remains active in the environment. Ivermectin deposited by several animals will decrease the beneficial insect population of a pasture (especially dung beetles).