FOX VALLEY EQUINE PRACTICE

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Deworming Q & A!

Why was it common to deworm horses every two months in the past?

In the past, it was common to deworm all horses on a farm at frequent, regular intervals. This was due to the fact that a certain gastrointestinal parasite called *Strongylus vulgaris* (large strongyles) was one of the most clinically significant GI worms at that time. This parasite was sometimes referred to as the equine "bloodworm" because part of its life cycle involved migrating through GI blood vessels. It had the potential to cause significant GI disease resulting in peritonitis, or infection of the lining of the abdomen. Deworming every two months prevented this parasite from maturing, laying eggs within the GI tract, and causing significant disease. Due to this frequent deworming, the prevalence of *Strongylus vulgaris* has decreased dramatically. Unfortunately at the same time, the prevalence of other GI parasites, most notably cyathostomes (small strongyles), *anoplocephala perfoliata* (tapeworms), and Parascaris (roundworms), has increased. These parasites are now the most common GI parasites in the horse. Their life-cycles differ from that of *Strongylus vulgaris* and thus, require a different deworming protocol than the traditional approach.

If frequent deworming helped control large strongyles, why can't I deworm frequently to control other GI parasites like small strongyles, roundworms, and tapeworms?

As mentioned above, the life cycles of these parasites differ from that of large strongyles and require a different deworming schedule. Furthermore, frequent deworming in the past has led to something called drug resistance. The traditional process of deworming horses at frequent intervals led to the development of resistance in the strongyle, roundworm, and tapeworm populations to our common deworming medications like ivermectin. Drug resistance means that parasites who are normally killed off when treated with the proper medication, dose, and timing are now surviving that treatment. Resistance develops when a portion of a parasite load survives deworming treatments and passes on their genes to the next generation leading to subsequent resistant offspring. This means that the more frequently a horse is dewormed, the more potential there is for parasite resistance to develop. This means we now aim to only deworm horses when necessary based upon their individual parasite load.

If deworming protocols are tailored to each individual horse, how will I know when it is time to deworm my horse?

Current deworming protocols are based upon the degree to which a horse is shedding cyathostome eggs because this small strongyle is today's primary GI parasite. "Shedding" means that there are mature cyathostome worms within the horse's GI tract that are laying eggs that the horse is passing in its manure. To determine how heavily infected your horse is with cyathostomes, a fecal egg count is performed. This test measures the number of eggs per gram of manure. Based upon the results, your horse will be classified into one of three categories; a low shedder, medium shedder, or high shedder. Deworming recommendations will be made based upon which category your horse fits into. High shedders are dewormed more frequently than low shedders. The goals of this protocol are to minimize the risk of parasitic disease in horses, control the amount of egg shedding into the environment, and to limit the development of drug resistance.

Ok, I want to have a fecal egg count done on my horse so I know exactly what deworming schedule fits him! How do I properly collect and store a fecal sample until my vet arrives to pick it up and send it to the lab?

Only one to two fecal balls are necessary to submit for a fecal egg count. Place the fecal balls into a clean, sealed bag such as a Ziplock baggie. Collect fresh feces that is less than 12 hours old. Refrigerate the sample immediately after collection and give it to your vet within a few days. The sample must never be frozen. If collected in the winter time, ensure the manure has not frozen on the ground before collection. The cost at Fox Valley Equine Practice for a fecal egg count is $35.

How often are low, medium, and high shedders dewormed?

In short, low shedders are dewormed twice a year, medium shedders four times a year, and high shedders six times a year. Below is a breakdown of the timing and medication recommended for each class of shedder. Ideally, a fecal egg count is performed every spring and fall.

LOW SHEDDERS		
April	-	Ivermectin or Moxidection*
November	-	Ivermectin with Praziquantel or Moxidectin* with Praziquantel

MEDIUM SHEDDERS		
April	-	Moxidection*
July	-	Ivermectin
September	-	Pyrantel Pamoate
November	-	Ivermectin with Praziquantel or Moxidectin* with Praziquantel

HIGH SHEDDERS		
February	-	Ivermectin
April	-	Moxidection*
June	-	Ivermectin
August	-	Fenbendazole
September	-	Pyrantel Pamoate
November	-	Ivermectin with Praziquantel or Moxidectin* with Praziquantel

*Do not use Moxidection (Quest or Quest Plus) on horses < 6 months old, small ponies, miniature horses, or very thin horses.

Is there anything else I can do to help decrease GI parasites in my horse?

Horses become infected from grazing pastures that are contained with manure from infected horses. Good pasture sanitation, composting, and avoiding ground feeding is important for decreasing the worm burden on a farm.