

November 2016: The word on worms

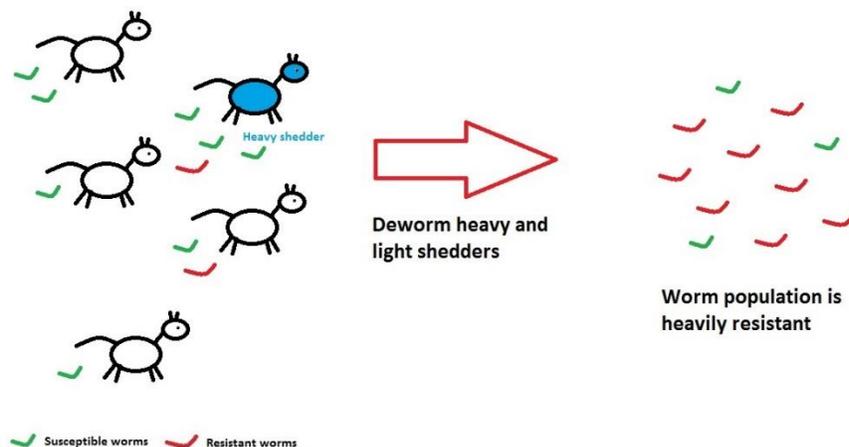
Despite relatively few advances in worming products on the market, deciding when to worm your horses with which product continues to be a common question we're asked about at Delaney Vet Services by new and seasoned horse owners alike. We'd like to address the mythical "worming schedule" this month by going back to basics and gaining an understanding of worms and worming products.

First off, why is worming such a confusing topic and why can't we take a "one wormer fits all" approach?

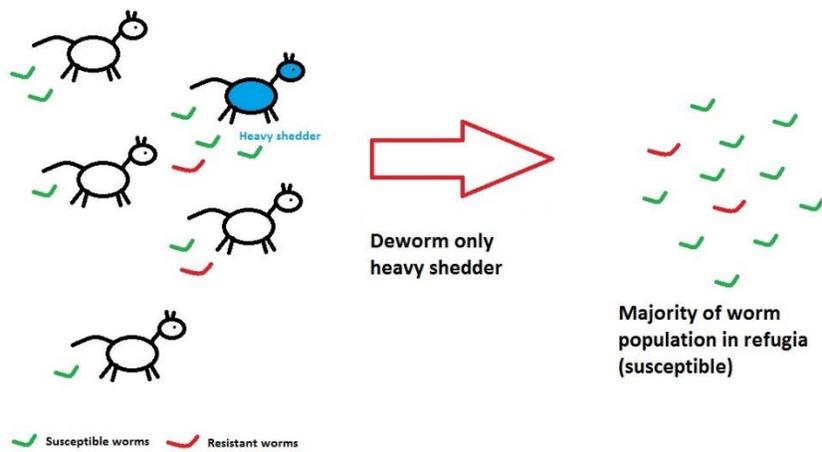
To start with, every geographical area and every type of housing or pasture environment is going to support a distinct worm population, making it impossible to put every horse on the same worming schedule. We need to be targeting the specific worm population that lives on your pasture. This makes communal living environments like boarding facilities very difficult to address. Additionally, individual horses have different susceptibility to worms, meaning that some will carry a heavy worm burden and shed large amounts of parasite eggs on pasture, whereas others will shed minimally. Horses that are categorized as "heavy shedders" will require more frequent worming treatments over the spring/summer than "low shedders". Fecal worm egg counts completed at least 8-12 weeks after your horses have been wormed can identify which of your horses might be contributing to the parasite population on your pasture.

So you've done fecal worm egg counts to identify your heavy vs low shedders. Why can't all of your horses go on the same worming schedule anyway?

Unfortunately, most of us don't have enough land to move our horses to clean, worm free pastures every spring and must live with the worm population present on our pastures. Let's look at a theoretical situation where we have 5 horses living on one pasture year-round. One horse is a heavy shedder, while the other 4 are low shedders. If we worm all 5 horses every 1-2 months' year-round we will effectively kill the majority of larvae within the horses' guts. However, a small minority of the worm population living inside these horses will be genetically resistant to the wormer, and will be able to reproduce inside the horse and shed eggs on to the pasture despite frequent worming treatments. This resistant population will continue to reproduce throughout the warmer seasons of the year, and the pasture will end up contaminated with resistant worm eggs and larvae.



Let's take this theoretical herd and instead of treating all of the horses on a set schedule, let's treat the low shedders once in the beginning of the spring and treat our heavy shedder more frequently over the spring/summer. Worming the heavy shedder frequently will select for resistant worms, BUT in comparison to the last example, the low shedders will produce low volumes of susceptible worms. On pasture, this susceptible population is termed "in refugia". Their purpose is to dilute out the resistant worm population on pasture so that all of your horses will continue eating susceptible worm larvae that will respond to dewormers. The big lesson here is that you will NEVER eliminate worms from a pasture. The key is to manage your worm population at a low level that won't negatively impact your horses' health.



Ok, so if you want to maintain a worm population "in refugia", when should you treat your low shedders with dewormers?

Our Albertan winters are so cold that most larvae cannot survive on pasture. However, eggs and more developed larvae can survive on pasture and certain types of worms (cyathostomes or small strongyles) can encyst within your horses' intestines. The best time to target encysted larvae is in the autumn when the temperature has dropped below freezing. The only worming product that consistently kills encysted larvae is moxidectin (Quest). We recommend treating with a combo moxidectin/praziquantel product (Quest Plus) to target both encysted larvae and tapeworms so that any eggs and larvae shed after treatment onto freezing pasture will die. Tapeworm treatment only needs to be done on an annual basis. Spring is then a great time to get your fecal worm egg counts done to identify which horses will need to be treated more frequently during the warmer seasons.

This brings us to a big question – which wormers should you be using in the spring/summer months?

We'll address this issue again when the time arises to plan your worming tactics but in brief, it's not an easy answer. There are several products on the market, and if you own pregnant mares or foals, you'll have to be a bit more selective to find a product that is safe for your horse. For non-pregnant adult horses, you have more options but we have a few tips on selecting the right wormer. First off, not all wormers treat all worms despite what their labels claim. Secondly, some worming products are less effective than others due to widespread worm resistance. You can test your pasture's worm resistance with a fecal egg count reduction test which involves performing fecal worm egg counts before and 2 weeks after deworming to see how effective your chosen wormer has been. Rotating wormers is not

generally recommended unless resistance has been identified in your first choice dewormer, and now another class of dewormer must be used. Routinely rotating wormers will lead to worm resistance against multiple classes of dewormers. We recommend performing fecal worm egg counts and discussing your worming plan with your veterinarian come spring.

In brief, here's a break down of deworming classes and the types of worms they target:

- Ivermectin and moxidectin – Effective against a wide range of worm species including large strongyles, ascarids, pinworms, bots, and adult cyathostomes. Moxidectin is effective against encysted cyathostomes.
- Fenbendazole – Effective against large strongyles. There is widespread resistance to fenbendazole in geographical regions where the produce has been used extensively.
- Praziquantel – Often sold in combination with ivermectin or moxidectin. This dewormer is effective against tapeworms.
- Pyrantel – Effective against large strongyles, ascarids, pinworms, and adult cyathostomes. A double dose is effective against tapeworms.

As you can see, there aren't that many types of dewormer available. We'd like to emphasize the importance of responsible deworming. If horse owners and farmers continue to overuse dewormers and select for resistant worms, we're going to quickly run out of treatment options! So please make it a New Year's resolution to make responsible deworming decisions this coming year!

Since deworming isn't 100% effective at controlling worms, what else can be done to reduce worm populations on pasture?

Deworming is only part of a bigger worm management picture. Worms like to live in warm environments, so picking up manure from your pastures can significantly reduce the worm population. Avoid overstocking pastures and keep foals/weanings/yearlings separate from your main herd as they are generally heavy shedders. Quarantine incoming horses until they have had a fecal worm egg count and been dewormed; make sure you allow time between deworming and introducing the new horse as your newcomer will shed following your dewormer treatment. And finally, rotating pastures with livestock can reduce the worm population as cattle and sheep carry different species of parasitic worms that cannot complete their life cycles inside horses and vice versa.

Please give us a call or stop by the clinic if you'd like to discuss your worming strategy further!

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