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# CRUM EQUINE PARASITE PROGRAM

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January 2011

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## Managing Parasites

*Tailored Parasite Control Programs*

Crum Equine Veterinary Service recommends deworming programs tailored to your individual farm. Some horses carry high numbers of parasites while other horses have strong immunity and thus, a smaller parasite burden. Fecal egg counts (FEC) are used to determine how many parasites each horse on a given farm carries. Money spent on proper diagnostics (fecal egg counts) will lead to less money spent on dewormers, less drug resistance, and better control of parasites. By determining your horses' parasite burden we can recommend a deworming protocol to accomplish our parasite control goals without unnecessary treatment of your horse(s). Studies have demonstrated that 20-30% of your horses harbor 70-80% of all worms.

Fecal egg counts will also help us to determine which dewormers work on specific farms. There are reports of parasite resistance to

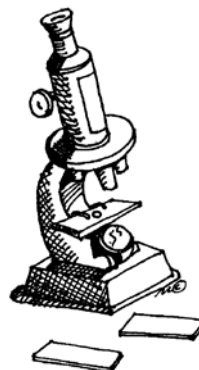
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## Parasite Program Goals

- Ease of use
- Minimize excessive expense to owners
- Minimize resistance to available dewormers and preserve the effect of dewormers in the future
- Customize a program for each horse and farm
- Determine the parasite burden (and shedding class) of each horse
- Allow science and diagnostics to guide treatment of horses
- Minimize unnecessary treatment of horses
- Determine which farms have resistant parasites to dewormers
- Perform appropriate fecal egg counts (FEC) to guide the deworming program

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the dewormers currently available for use in horses. We have to use the medications available judiciously to try to avoid and prevent further resistance of parasites.

Fecal egg counts can be performed at our office. Worms shed eggs into a horse's digestive tract. These eggs are then passed with the manure and can then be ingested by other horses in the form of contaminated grass, hay, etc. By counting the number of parasite eggs present in a fecal sample, we can determine an estimate of the horse's total parasite load. After the egg counts are determined, a veterinarian can suggest a deworming protocol for the horse or horses that were tested.

#### **Sample Submission:**

Collect a few fresh fecal balls in a ziplock bag. Try to choose fecal balls that are not contaminated with soil or bedding. Please be sure to label the bag with your last name and your horse's name. The fecal sample should be refrigerated within 12 hours after collection to ensure that the eggs do not begin to hatch. We are not able to determine a parasite burden in the feces if the parasite eggs have already hatched. Feces can be tested up to 7 days after collection and still provide accurate results.

**Samples can be dropped off at the office Monday through Friday from 9a-4:30p. Samples can also be given to one of our veterinarians during a farm visit. We will call you with the results of the testing.**

Horses will be classified into one of three categories based on the results of their FEC. Horses that have less than 200 eggs per gram of feces (EPG) are considered to have a low parasite burden and will require less deworming each year. Horses with between 200 and 400 epg are considered to have a moderate burden. Horses with more than 500 epg are considered to have a high parasite burden and will need more treatments to control their parasite burdens.

## DETERMINING DEWORMER EFFECTIVENESS ON A FARM

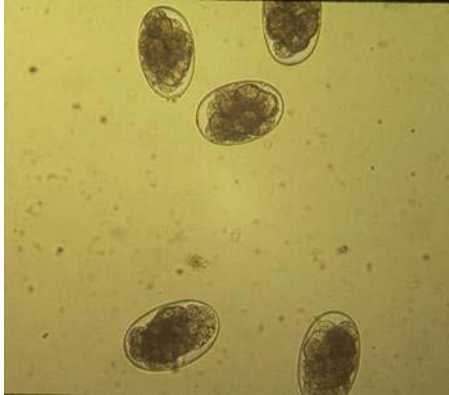
To determine if there is parasite resistance to specific dewormers on a farm, paired fecal tests must be run. First, a suitable withdrawal period must pass after the last deworming on that farm. The withdrawal times for different dewormers are as follows:

- Strongid or Pyrantel: 9 weeks
- Ivermectin: 12 weeks
- Moxidectin (Quest): 16 weeks

After that time period has passed, submit a fecal sample for fecal egg count testing. The horse(s) can then be dewormed with the product being tested. A second (post deworming) fecal should be submitted ten to fourteen days after administration of the dewormer.

If there is a 90% or greater reduction in the number of eggs per gram in the second fecal, then that deworming product is still effective on that particular farm. If there is less than a 90% reduction in the parasite load and the horse was dosed appropriately according to weight, then resistance is likely.

Ivermectin and Moxidectin have fewer problems with resistance than the other products available for use.



*Strongyle Type Eggs (microscopic view)*

#### 6-8 WEEKS NO LONGER APPLIES

Better use of technology allows us to practice better medicine. By formulating a parasite control program based on the needs of your horse, we can use dewormers more judiciously. This management program may require a little more effort to get started but it will mean less exposure to toxins for your horse. It will also be using technology to guide parasite management rather than the old stand by that every horse needs dewormed. We are finding that not every horse needs dewormed as frequently as previously thought. Give our office a call and let us guide you through the process to a healthier and better managed parasite program.

## Prevention for the Future

Parasite resistance to the dewormers available is becoming a more prominent problem. It is important to use the dewormers that we have available judiciously to try to prevent further resistance. New dewormers are not currently being developed. Dewormers need to be used carefully and their use should be based on the actual parasite burden of the horse and the herd.

By performing fecal egg counts, we can determine the parasite burdens of individual horses and herds of horses and thus formulate a deworming program based on need rather than just broad recommendations that are no longer as effective as they should be. By determining fecal egg counts, we can identify parasite resistance to dewormers on a farm by farm basis. We can then also manage the horses that need more intensive deworming better while not having to overdose those horses that carry a smaller parasite burden.

