Equine Parasite Control Guidelines

Dr. Juliette Carroll Parciany DVM, MS

REASONS TO PERFORM FECAL EGG COUNTS (FEC)

- To determine the shedding status of the horse at the time of sampling.
- To evaluate the efficacy of your dewormer using the Fecal Egg Count Reduction Test.
- To determine whether parasite burdens in young horses are primarily ascarids (roundworms) or strongyles.

Considerations for mature horses:

Focus on control of small strongyles. Individual horses differ markedly in their susceptibility to strongyle infection, and these differences are manifested in the magnitude of fecal egg counts. More than 80% of all the parasites within a herd might be harbored by only 20% of horses. Approximately 50% of the horses in most herds consistently exhibit low fecal egg counts (less than 200 eggs per gram, EPG) even in the absence of treatment. Conversely, a small proportion of the herd (about 20%) may be responsible for the majority of pasture contamination with strongyle eggs, and controlling parasites in these animals will have the greatest impact on the risk of infection for the entire herd. Horses should treated based on evidence of infection, not schedules or tradition.

Ivermectin and moxidectin remain the foundation for control of strongyle parasites. Consider including a treatment effective against encysted/larval small strongyles (such as Moxidectin) at a time when the mucosal burden is at its peak. Typically, this is more likely to occur towards the end of the grazing season, ie. fall in northern climates, and spring in the more tropical and subtropical climates.

All horses should receive a basic foundation deworming, despite their fecal egg count numbers. This should consist of one or two yearly treatments to target large strongyles, tapeworms,pinworms,bots, and spirurid nematodes responsible for causing summer sores (*Habronema* spp. and *Draschia* spp.). Depending on climatic conditions, one or two yearly treatments are sufficient to prevent occurrence. A product effective against tapeworms (containing praziquantel) should be administered annually if they are a problem in your region.

Deworming programs for adult horses should be designed with the following principles in mind:

- Adult horses vary greatly in their susceptibility to infection with small strongyles and their level of strongyle egg shedding. Therefore, each requires individualized attention to their parasite control needs.
- A Fecal Egg Count should be completed prior to deworming. Once the animal is dewormed, the efficacy of the dewormer used should be evaluated with a Fecal Egg Count Reduction Test 14 days after treatment. The follow-up test will identify any dewormer resistance.
- All further treatments should be targeting horses with a high strongyle contamination potential, or horses that show signs of parasitic infection from non-strongyle parasites.
- Focus anthelmintic treatments during seasons of peak transmission (usually spring and fall)

Considerations for foals, weanling, yearlings:

Ascarids (roundworms) are the most important parasite in young horses. Targeted treatments based on fecal egg counts are not recommended in foals. Instead the following considerations should be made.

During the first year of life foals should receive a minimum of three anthelmintic treatments.

- 2-3 months of age → First deworming with a benzimidazole drug such as fenbendazole (Panacur/Safegaurd).
- Second deworming with a benzimidazole is recommended just before weaning (approximately six months of age).
- At weaning- fecal egg counts are recommended to determine whether worm burdens are primarily strongyles or ascarids. This will facilitate the right choice of drug class.
- Third and fourth treatments should be considered at about 9 and 12 months of age, respectively, and treatment may shift to begin targeting strongyles. Tapeworm treatment should be included on one of these latter treatment occasions. Tapeworms are treated with product containing praziquantel. Annual treatment with a praziquantel is usually all that is necessary.

Although ivermectin & moxidectin are the treatment of choice for small strongyles, high levels of ivermectin/ moxidectin resistance has been documented in ascarid populations. Pyrantel (SafeGard) resistance is on the upswing as well. Ascarid resistance to benzimidazole drugs has not yet been documented, and appears to represent the best choice for ascarid treatment on many properties. Given the levels of resistance found among ascarids to ivermectin and moxidectin, fenbendazole is the best treatment option for ascarids.

Additionally, current evidence suggests that deworming of a heavily parasitized foal with a dewormer that has a paralytic mode of action (ivermectin / moxidectin), can cause acute small intestinal impaction. This association has not been found with benzimidazole type drugs, which represent a better treatment choice for ascarid infections.

Other general points to consider:

- Do not under-dose horses and foals; use weight tapes or scales to determine body weights.
- Small strongyles, large strongyles, and tapeworms are acquired on pasture. Ascarids and pinworms can be acquired in confinement as well as on pasture.
- Use properly performed FECs to determine shedding status and drug efficacy of new arrivals before turnout in common pastures.
- Concentrate drug treatments when the local climate favors parasite transmission.
- Decrease treatments when climate conditions are adverse (hot summer / freezing winter) for larval survival and / or transmission.
- Design a parasite control program that considers the farm's management practices and region of the country.