

# Parasite Control Recommendations for Florida:

The modern way to manage your deworming program and why you should start in October

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Although (or maybe because) there have not been any new anthelmintics put on the equine market since the addition of Moxidectin (Quest), the recommendations as to how to use these products has shifted drastically in the last few years. In order to shift your own thinking from the classic bimonthly rotational system to a more logical and strategic approach, a few facts are very important to understand:

- 1) Strongyles are the only significant parasites of adult horses. They are transmitted by pasture grazing. Large strongyles can be suppressed with one larvicidal treatment every 6 months. Small strongyles (cyathosomes) are more difficult to manage and are what needs to be targeted in the new strategic deworming program.
- 2) Infective larvae develop between 45-85 Fahrenheit - In Florida, development and persistence is highest in Spring and Fall, and basically non-existent in the Summer.
- 3) There is a large difference in individual horse susceptibility to parasites. Horses can be categorized as low, medium or high egg shedders by performing a simple fecal exam prior to deworming. The individual horse remains in that category for life (although with old age, a decrease in resistance may be noted) and this category determines how the horse needs to be dewormed.
- 4) Resistance to all types of anthelmintics is on the rise. The cause, just like antibiotic resistance, is inappropriate and over-use of these products.

There are two steps necessary to create a strategic deworming program on your farm. First you need to identify the individual differences in your horse's susceptibility to internal parasites, and secondly you need to identify any anthelmintic resistance that is already present on your farm. Even though the steps outlined below may seem a little labor intensive at first, the protocol will save time and money in the long run by giving you the information you need to treat for parasites only at the logical time, with the logical product.

## STEP ONE: IDENTIFYING INDIVIDUAL DIFFERENCES IN SUSCEPTIBILITY

Only 20-30% of horses harbor the majority of parasites, while another 20% apparently have very little parasites. To identify what category each horse fits in, it is necessary to do a quantitative fecal egg count on each adult horse on the farm. A quantitative fecal egg count, performed at Buena Vista Farm or at a veterinary lab of your choice (be sure they do quantitative fecal egg counts, not qualitative), requires a small amount of fresh manure taken from each horse, ideally after a long (3-4 months) respite from deworming. Since we already discussed that parasite activity is basically non-existent in the summer in Florida, October is the perfect time to do the fecal egg counts. In October in central Florida the temperatures start dipping slightly and the larvae will start emerging again on the pastures. It is the perfect time to start the new strategic parasite control program.

After all adult horses on the farm are tested, they are ranked as low, medium or high egg shedders, depending on the eggs per gram (EPG) that were found in their manure. Low shedders are defined as having <200epg, medium have 200-500epg, and high egg shedders have >500epg. Horses under the age of 3 are categorized as high shedders for the purpose of the deworming schedule. Foals are treated differently and will be discussed later.

The horses are then treated according to this schedule:

1) **LOW SHEDDERS:** (<200 epg)

*October:* **IVERMEC GOLD** (or any product containing ivermectin and praziquantal)

*January:* **QUEST PLUS**

2) **MODERATE SHEDDERS:** (200-500 epg)

*October:* **QUEST PLUS** or **IVERMEC GOLD**

*January:* **IVERMEC GOLD** or **QUEST PLUS** (reverse of what was used in October)

*April:* **ANTHELCIDE** (Oxibendazole) +/- **STRONGID** (Pyrantel paomate). May also use double dose **STRONGID** or **PANACUR POWEPAC** (fenbendazole at double dose for 5 days) for tapes.

3) **HIGH SHEDDERS:** (> 500 epg)

*October:* **QUEST PLUS**

*January:* **IVERMEC GOLD**

*Mid-February:* **IVERMECTIN**

*April:* **ANTHELCIDE** +/- **STRONGID** or **DOUBLE STRONGID** or **PANACUR POWERPAC**

## STEP TWO: EVALUATING ANTHELMINTIC EFFICIENCY ON THE FARM

In order to assure that each dewormer is still effective on the farm, a percentage of the resident horses have to be retested two to three weeks after the anthelmintic is administered. Use 10% of the population, or at least 6 horses for you sampling. Submit fecal samples. The lab will be able to calculate the fecal egg count reduction (FECR) by comparing the pre- and post-deworming samples. A reduction of 95% or greater is considered effective, less than 85% is resistant. If your farm has developed a resistant population of parasites you should never use that particular dewormer by itself again and your deworming protocol will have to be modified. Over time you can perform this test on all the anthelmintics you use during the year.

Resistance has become a major concern in many areas and is due to inappropriate use or over-use of the available anthelmintic products. Panacur, for example, is probably no longer very effective as a single dose application. The Powerpac is more effective, especially against encysted larva, but using it indiscriminately on the entire horse population is likely to breed "super" parasites resistant to this as well. Products such as oxibendazole (Anthelcide) and Strongid may work better in combination than alone, but unless you check your herd's egg counts after deworming you will never know.

## THE EGG REAPPEARANCE PERIOD

Another important concept to understand is that the egg reappearance period differs for different anthelmintics. In other words, the time it takes for parasite eggs to show up in the manure depends on the dewormer used. Anthelcide, Panacur and Strongid all have an ERP of 4 weeks. Ivermectin is officially 8 weeks, but recent resistance issues may change that to 6 weeks. Quest is 12-16 weeks. When using Quest, there is no reason to deworm again before 3 months, even for the high shedders.

## PASTURE MANAGEMENT

Pasture management is, of course, still a hugely important part of parasite control. The amount of infective larvae that are present in a pasture environment can be greatly reduced by good farm management techniques. Large farms benefit from pasture rotation, whereas small farms may be able to reduce the parasite burden by manually picking up manure piles or vaccuming the fields. Ideally horse herds should be allowed enough room to have a “feeding” area and a “toilet area”. Dragging the fields, especially in the winter, is not recommended, as it will drag the manure into the “feeding’ areas.

## FOALS AND WEANLINGS

Foals and weanlings differ from adult horses in that their primary parasite is the round worm (*Parasaris equorum* or ascid). They also need time to develop immunity to both the round worm and strongyles and are thus mores susceptible to parasites up to the age of three. It is not necessary to deworm foals before 60 days, because round worms take 8-12 weeks to become adults, and Anthelcide, Strongid and Panacur only work against adult round worms.

Since there is a significant resistance problem with round worms, it does become important to fecal test 10% of your foal population 3-4 weeks after deworming to see how effective the anthelmintic you are using actually is.

Panacur should only be used in the 5 day Powerpac version, as its effectiveness against roundworms in a single does it questionable. It will however kill the migrating larvae in the Powerpac dose, which can be a cause of respiratory disease in foals.

The basic recommendation is as follows:

- 1) 2 months of age: Deworm with Anthelcide +/- Strongid
- 2) 3 months: Do fecal egg count on 10% of foals to see how effective your anthelmintic product is.
- 3) 4 months: Anthelcide +/- Ivermectin. (Use Ivermectin if you had significant strongyles in the fecal at 3 months.). Powerpac may be substituted here or at 6 month if respiratory illness is an issue.
- 4) 5 months: fecal Egg Count on 10% of herd
- 5) 6 months: Double Strongid or Ivermectin
- 6) 8 months: Quest
- 7) 11 months: Anthelcide+/- Ivermectin

Between 1-3 years of age, treat horse as a high shedder and deworm accordingly.

## SHOW OR RACE HORSES

Since both strongyles and tapes worms need a pasture environment to fulfill their life cycle, stalled adult horses should have a very small parasite load and should mostly be considered low shedders for the purpose of the deworming schedule. Of course individual turn out varies and should be taken in consideration. Always do a fecal test on all horses that enter the farm and start the program. Repeat in October before deworming the first time in the fall. Daily Strongid feeding is not recommended due to the high potential for developing resistance.

This strategic parasite control program will allow you to be more selective as to when to treat, what to treat and whom to treat. It will decrease your costs significantly and also your chances of creating a resistant parasite population on your farm. Of course, the above recommendations are only guidelines which can be adjusted to fit individuals’ needs.

The take home message: **DON'T BE AFRAID TO FECAL TEST YOUR HORSES!**