

New Strategies for Parasite Control

Intestinal parasites are an important threat to your horse's health, and at Pacific Crest Sporthorse our goal is to insure he's well protected with an effective deworming program. Recent reports of parasite resistance to common deworming medications have captured our attention—and caused us to rethink our strategies for parasite control.

The Basics.

Over the years, a number of changes have occurred in the parasite populations that have changed the way they respond to medications. Different species of worms such as the small strongyle and tapeworm have become a more serious concern, while others such as the large strongyle have become less important. On top of that, widespread use of deworming drugs has led to resistance within some of these parasite populations. The battlefield has changed, and we need to make sure the weapons we employ to fight them are still effective. If we don't, the worms will win. Because of this, it's time to make some changes in our control strategies.

Our Goals

Our newly designed parasite control program is targeted to meet the following 3 goals:

- *Minimize pressure on effective dewormers:* Resistance to various deworming medications is widespread. However, ivermectin, moxidectin and fenbendazole administered in a larvicidal dosing (double dose daily for 5 days) all remain effective deworming strategies against most classes of parasites, with very little reported resistance to date. If we overuse these medications in our environment, however, we risk encouraging the development of resistance. The same is true for praziquantel, the medication that's most effective for treating tapeworms. By designing a strategic parasite control strategy that uses deworming medications only when needed, the pressure on these drugs is lessened, meaning they'll remain effective weapons for as long as possible.
- *Identify resistant horses:* Studies show that certain horses tend to harbor larger numbers of parasites than others—and may be more resistant to deworming medications. These resistant horses may not only suffer health concerns of their own because of their heavier parasite loads, they'll also shed more eggs—putting others on your farm at higher risk. If we can identify these resistant horses, and target them for more aggressive treatment than their non-resistant herd-mates, everyone benefits.
- *Monitor resistance on farms:* No matter how hard we try, resistance will occur. As the final step in our control strategy we'll monitor the effectiveness of the dewormers we do administer to make sure they're still working.

The Strategy

The most reliable monitoring tool available is measurement of parasite eggs passed in your horse's feces, called a fecal egg count. Although there are some factors that can cause inaccuracies in these measurements (such as parasites that can be present in larval forms without passing eggs), a high egg count is a solid indicator of a significant parasite load. In addition, a reduction in egg counts following deworming means the deworming drug is working. Our new program employs regular fecal egg counts as a critical monitoring tool.

The new schedule only calls for regular dewormings twice yearly in the spring and fall months. Prior to every deworming, fecal egg counts will be performed in order to identify potential resistant horses. Even if the egg count is zero at this time, however, a regular deworming is still recommended. This will help protect against possible false negative tests, account for larvae that may not be shedding eggs, and treat for bots. *(It's interesting that large strongyle populations, virtually eliminated in the majority of horses in the United States, are on the rise in countries where deworming frequencies have dropped to less than twice a year. Therefore we feel a minimum of two annual dewormings should still be performed, regardless of egg counts).* If egg counts are high (>200 eggs per gram) at the time of the deworming, a follow up fecal check should be performed 7-14 days later to insure there's no resistance to the deworming medication. During summer and winter months, egg counts are recommended to identify resistant horses, but a dewormer is administered only when egg counts are high.

The recommended schedule for deworming mature horses is as follows:

Spring (March/April)

- Check fecal egg counts

- Deworm all horses with moxidectin/praziquantel

- Check fecal egg counts on all horses with EPG>200 prior to deworming

Summer (June/July)

- Check fecal egg counts

- Deworm all horses with EPG>200 (dewormer choice based on fecal exam)

Fall (September/October)

- Check fecal egg counts

- Deworm all horses with ivermectin

Winter (December/January)

- Check fecal egg counts

- Deworm all horses with EPG>200 (dewormer choice based on fecal exam)

Questions

Isn't it expensive to do all of those fecal egg counts?

Managing your deworming program with fecal egg counts costs about the same amount of money each year as an interval deworming program—the cost of lab testing replaces the cost of administering unnecessary chemicals to your horse.

What about Strongid C?

In many situations, daily deworming with Strongid C is still a great strategy. Although there has been some resistance to pyrantel reported, it is not necessarily more likely to develop in horses receiving daily Strongid C. In fact, there is more resistance to pyrantel reported in European countries where daily dewormers are not in use than there is in the United States. The advantage to daily deworming is that it reduces the overall numbers of eggs shed by individual horses, and can help minimize pasture contamination.

Foals

Youngsters require some special considerations, from the time of birth until 2 years of age. Ascarids (round worms) most common in young horses, and should be targeted with specific dewormers most effective against these types of worms. In addition, most youngsters are at higher risk for parasite problems than their older counterparts. Parasitologists recommend that young horses still be maintained on a regular interval deworming program.

The recommended schedule for deworming youngsters is as follows:

45-60 days of age:	Oxybendazole.
4 months of age:	Ivermectin
6 months of age:	Oxybendazole
8 months of age:	Ivermectin
10 months of age:	Moxidectin
12 months of age:	Oxybendazole
14 months of age:	Ivermectin
16 months of age:	Moxidectin/praziquantel
18 months of age:	Oxybendazole
20 months of age:	Ivermectin
22 months of age:	Moxidectin/praziquantel
24 months of age:	Begin adult deworming program

(note: Oxybendazole is the most effective dewormer for targeting roundworms. Optional choices would include fenbendazole and pyrantel)

A Final Note: Don't Forget Good Management

As resistance problems become more widely recognized, it's no longer possible to rely on medications as a guaranteed method for parasite control. These days, basic pasture management to control exposure simply can't be overlooked. Take the following steps to keep your horse's parasite exposure to a minimum:

- Keep stalls and paddocks clean, and remove manure from pastures on a regular basis.
- Don't spread manure on horse's grazing areas.
- Mow or harrow pastures regularly, according to growth. Grass heights should be maintained below 4-5 inches.
- Avoid overcrowding. 1-2 acres per horse is ideal, depending on your environment.
- Maintain groups of horses on pasture segregated by age group. Youngsters (especially yearlings and 2-year-olds) are likely to shed larger numbers of parasite eggs, and may require more frequent deworming than their older counterparts. Avoid exposure of your mature horses by maintaining them separately.