

Controlling Internal Parasites in Equids

Internal parasites can cause several health problems in equids, including colic and weight loss. There are multiple parasite-control methods available, and a combination of methods is often optimal.

Anthelmintic (dewormer) options

Controlling internal parasites¹ in equids² is most commonly achieved by administering oral dewormers (anthelmintics). Several different anthelmintic products are available, many of which contain the same active ingredients. Not all anthelmintics, however, are effective against all the most common parasites listed below.

There are four major anthelmintic drug classes used to treat internal parasite infection in equids:

1. Macrocyclic lactones
2. Benzimidazoles
3. Tetrahydro-pyrimidines
4. Prazino-isoquinolines

A summary of these drug classes and their active ingredients are listed follow:

Macrocyclic Lactones:

- **Ivermectin:** Targets all parasites with the exception of tapeworms. Ivermectin is effective against some migrating strongyle (a type of internal parasite) larvae.
- **Moxidectin:** Targets all parasites with the exception of tapeworms. Moxidectin is partially effective against encysted small strongyles.

Benzimidazoles:

- **Fenbendazole:** Targets large and small strongyles, pinworms, and roundworms and, when used at double the normal dose for five consecutive days, is effective against migrating strongyle larvae and encysted small strongyles.

¹Common internal parasites of equids:

- Small strongyles (cyathostomes)
- Large strongyles: *Strongylus* spp
- Roundworms (ascarids): *Parascaris equorum*
- Pinworms
- Tapeworms: *Anoplocephala* spp
- Bots

²Domestic horses, ponies, donkeys, mules, and/or other equine species.



- **Oxibendazole:** Targets large and small strongyles, pinworms, roundworms, and threadworms (*Strongyloides westeri*)

Tetrahydro-pyrimidines:

- Pyrantel pamoate: Targets large and small strongyles, pinworms, roundworms and, when used at a double dose, kills tapeworms

Prazino-isoquinolines:

- **Praziquantel:** Targets tapeworms

Deworming Strategies

The first step in an effective deworming program is to determine the level of infection and the type of internal parasites on the farm. The fecal egg count reduction test (FECRT) is a very useful tool for doing so. Before administering the FECRT, however, you must wait approximately 8 weeks after your equids' last deworming treatment. Once 8 weeks has passed, fecal samples should be collected from up to six individual animals, and egg counts should be completed on the samples by a laboratory.

A second sample should be collected approximately 10-14 days after the first test, and egg counts should be repeated on the postdeworming sample. Once the second test is completed, comparisons can be made to determine the efficacy of the anthelmintic used and if changes need to be made to target specific parasites. If there is no resistance on your farm, the egg count will be reduced by 90 to 95 percent. If there is not a 90- to 95-percent reduction in egg counts, the equine parasites on your farm are resistant to the anthelmintic used, and that drug should not be administered on the farm in the future.

By scheduling routine fecal tests for your horses, owners can tailor their deworming program to meet the needs of each individual horse. Using anthelmintics targeted specifically for the parasites on the farm can help reduce parasite burden and anthelmintic resistance on the farm.

When to treat for parasites

Anthelmintic treatments should be done during optimal times of parasite larval development. Eggs hatch and develop into infective larvae under conditions of moderate temperature and moisture. Treat equids at the beginning of summer, and then wait until fall when the weather cools before treating again. Anthelmintic treatments should be minimized during:

- Hot summers
- Droughts
- Extreme cold temperatures and when snow is present

Target animals

Equids less than 3 years old, which are more susceptible to parasite infection and at greater risk of disease, should be treated more frequently than older horses. Yearly FECRTs should be done to evaluate the efficacy of the treatment against strongyles. Foals should receive a minimum of four anthelmintic treatments: one treatment at 3, 6, 9, and 12 months of age. High-shedding mature equids should be treated 3 to 4 times per year, as 20 to 30 percent of infected adult horses shed approximately 80 percent of the eggs. Therefore, treating high-shedding horses will greatly reduce egg shedding on the farm.

Mature equids that are not high shedders of fecal eggs should only be treated one to two times per year, targeting large strongyles, tapeworms, bots and the nematodes, which can cause summer sores.

Other considerations

Regular and diligent manure removal from areas where horses graze can help reduce parasite populations on a farm. Farms that harrow and/or apply manure to pastures should do so when the weather is hot and dry. Manure should be composted before it is spread to reduce parasite loads. Farms with a high turnover of equids usually have a greater parasite management problem than farms without a high turnover rate. New equids can carry parasites that might not currently exist on a farm, which puts all equids on the farm at risk of parasite infection. Ideally, new equids should be quarantined and a FECRT should be performed. When egg counts are low, quarantined equid can be released to the general herd. If fecal egg counts are moderate to high in the pre-deworming sample, dosing with ivermectin or another macrocyclic lactone is recommended. If the second fecal test shows a significant reduction in eggs, the equid can be released into the herd.

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