

Internal parasite management in sheep

By Ulf Kintzel

Internal parasites are often very poorly managed, may it be by wrong pasture management or by using wrong de-wormers or de-worming at the wrong time. In fact, in my opinion internal parasites are the killer #1 in most flocks that I have seen. Internal parasites can become overwhelming and hard to manage in some years, especially when it is wet.

The Barber Pole Worm (*Haemonchus contortus*) is in my opinion the single most dangerous worm that can kill sheep and lambs at a high rate. It is mainly but not exclusively a problem in the middle of the summer. This worm sits in the true stomach (the abomasums) by the hundreds and thousands and sucks lots of blood. This leads to anemia, significant loss of weight, damage to the stomach and often to death in both adults and lambs. Anemia and sometimes a bottle jaw (swelling under the lower jaw) are the clear symptoms of an infestation with barber pole worms. When you open up a sheep that died because of it, you are likely to find significant holes in the forth or true stomach.

First step in controlling this and most other internal parasites is pasture management. Rotational grazing means a lot less parasite pressure than set stock grazing. Leaving residue of about 3 to 4 inches is one good practice but does not work quite as well for sheep as it does for cattle. Due to the sheep's pointy mouth it is able to eat extremely selectively. That means that a flock of sheep can eat a patch of tasty forage i.e. White Clover down to the ground within hours and will leave other species of forage alone until the tastiest legumes or grass are completely gone.

Leaving your own pasture for at least three weeks and graze the sheep on some rented land helps to break the three-week cycle of the worms. If you have a neighboring farmer who can seed down some cereal rye in August at 3 bushels per acre you are likely to be able to pasture the rye twice before winter. Harvested hayfields may be another option. If this is not possible one should attempt a rotational schedule of no less than three weeks on his/her own land.

Selecting sheep that are more resistant to internal parasites is another great tool. This is done by eliminating those sheep that show clinical signs of worm infestation again after de-worming took place. One needs to be ruthless to do that since you will find that you will have to cull sheep that are otherwise very productive. Get rid of them anyway! It pays in the long run.

Selecting the right de-wormer is also very important. The Barber Pole Worm is very often immune to all "white" de-wormers (i.e. Safe-Guard, Panacure, Valbazen). Furthermore, it builds quickly resistance against Ivermectin/Ivomec. The reason for fast immunity to the very common de-wormer Ivomec is the fact that, to simplify it, immune worms when mating with susceptible worms create immune worms. On the other hand, Levasole or Levamisole (Prohibit) is still very effective because, simply said, an immune

worm when mating with a susceptible worm creates again susceptible worms. Another very effective but very expensive de-wormer against Barber Pole Worm is Cydectin. It is fairly new on the US American market but has been used for years in European countries like Germany. Now there is some worm resistance against Cydectin as well. Since I expect the same resistance to develop over time here in the US I use it very rarely.

The second worm to be concerned about is the tapeworm. Adult sheep are immune to the tapeworm and those who aren't quite yet are not much bothered by it. In lambs the tapeworm can cause significant loss of weight and at times also death. The segments of an adult tapeworm are clearly visible in the manure. It is extremely easy to analyze whether or not lambs are infected. The tapeworm does not respond to any of the "clear" de-wormers (Ivomec, Levamisole, Cydectin). The most price effective de-wormer available that kills tapeworms is Valbazen.

With few exceptions there should be no regular schedule for de-worming. Anyone who still recommends de-worming every six weeks is wrong. It should be mostly done on a need to do basis. I like to de-worm my ewes with Cydectin or Prohibit at lambing in the spring. This way the worm pressure on the pasture is reduced when it matters the most and when the ewes are the least capable to build immunity. I also like to de-worm the ewes again in the fall when the grass stopped growing in the late fall/early winter when it gets cold or when I leave my farm and graze the sheep on neighbors' fields. This way I get my ewes "clean" and the chance that they get re-infected right away is very low. (I put "clean" in parenthesis since there is no such thing as getting sheep actually parasite free). The lambs get de-wormed for the first time when they are about six weeks old. That is when they need it the most. I use Levasole or, if tapeworms are present, a Levasole/Valbazen mixture. Usually, the ewes do not get de-wormed at that time.

In a dry year I try to wait it out and don't do any further de-worming until the fall. Or I just de-worm the ones that seem to be infected. In a wet year the worm pressure may become so much that both ewes and lambs need to be treated again during the summer. Most often, I use Levasole.

As long as you are capable of seeing the first signs of an infestation there is no need to take immediate action. I always wait a while. This way I kill two birds with one stone. There will be more adult worms to be killed and the immune systems of the sheep are more challenged and thus the sheep are more likely to build resistance. On the other hand, waiting too long will lead to losses or may affect the sheep's growth. It is a balancing act.

The means to de-worm my sheep are my chute my dog and my drenching gun (see picture). The dog moves the sheep from a holding pen into the chute and makes them move up that there is little to no space in between any two sheep. A second person can replace the dog. When the chute is full I close it and I walk through the chute from the front to the rear and de-worm as I walk through. Important is that the chute is narrow enough that no sheep can turn around. Then I empty the chute by opening the front and letting the sheep go into another holding pen, followed by refilling the chute.



A third problem can be coccidiosis. This often occurs in the months of July and August. I put Di-Methox or the like in drinking water. It was recommended to me to add some Jell-O powder to reduce the bitter taste of it. The treatment has to be done for five consecutive days. Coccidiosis often causes diarrhea and thus dehydrates the affected lambs and sheep. The beauty is they are the ones who are more likely to drink the bitter brew because of the dehydration the diarrhea causes .

In summary, none of the above described methods alone is the secret to successful internal parasite management. A mixture of proper treatment, rotational grazing and selecting for parasite resistance is in my opinion the key to reducing these parasites to an acceptable level.

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