Tapeworms in Sheep

—Ulf Kintzel



My four-months-old replacement ewe lambs no longer showed any tapeworm infestation in late July.

Few parasitic worms generate as much excitement in new sheep flock owners as the tapeworm. Why? Because its large white segments are easy to spot in the stool of lambs, and anything you can see tends to feel urgent. Yet tapeworms are among the least concerning parasites in a flock. Others deserve far more attention. The barber pole worm can kill a lamb outright. Gastrointestinal nematodes such as thread-necked worms (*Nematodirus battus*) and black scour worms (*Trichostrongylus colubriformis*) can cause severe diarrhea, and that must be addressed quickly to avoid losses. Tapeworms pose no such threat.

Tapeworms (*Moniezia expansa*) in sheep and goats are host specific, meaning they do not infect other kinds of animals. Likewise, the tapeworms of other species do not affect sheep and goats, although limited infection with cattle tapeworms has been documented.* Sheep and goat tapeworms require an intermediate host before they can infect lambs. That host is a tiny pasture creature called an oribatid mite. Because tapeworms depend on this intermediate step, sheep never ingest tapeworm larvae directly. Instead, they pick up infected mites while grazing. They themselves may get infected by grazing in areas with tapeworm-infested manure, because oribatid mites feed on the eggs in those segments, and lambs pick up the mites while grazing.

Tapeworms are almost entirely a problem of grazing lambs in the spring and early summer. Sheep cannot pick up infested mites from hay or haylage/baleage, because both drying and fermentation kill the mites and make them noninfective. If you lamb in the fall or winter and raise those lambs on stored feed and grain, you may never see tapeworms at all. But if your lambs graze on spring and summer pasture, you have likely noticed the white tapeworm segments in their manure.

As the season moves into midsummer and early fall, those spring-born lambs often stop showing tapeworms even without any treatment. What happened? Lambs develop immunity early, usually around four to five months of age, because tapeworms do not suppress the immune system. The immune system can easily recognize the tapeworm as a foreign invader and build antibodies against it. By the time lambs reach four to six months of age, most are fully immune. Adult sheep rarely, if ever, carry tapeworms.

What remedy would you use to treat tapeworms if you chose to? The short answer is none. Here is the long answer. Perhaps ten and twenty years ago, there were dewormers that worked. Valbazen (albendazole) was still effective in my flock when I used it some years back, but its effectiveness gradually declined. Now it hasn't even been available for a year or two, possibly because of supply chain disruptions. Before that, fenbendazole products like Panacur and SafeGuard used to be effective against tapeworms in sheep, but they no longer are. They haven't listed tapeworms on their labels for many, many years.

Since I had not used any fenbendazole product on my farm for many years, perhaps even decades, I wondered whether it might still have some effect against tapeworms in my flock. So I bought a five-liter (1.3 gallon) jug of a generic fenbendazole and dewormed my lambs when they were between two and three months old. Tapeworm segments were clearly visible before deworming, and they were clearly visible after deworming. I had given a high dose, higher even than the recommended high dose for goats, and it still had no effect. (Fenbendazole has an extremely wide safety margin, which allowed me to choose a very high dose.) That is 500-some dollars I will never see again! Why did I bother trying when I already knew tapeworms do not cause real harm? Curiosity got the better of me. I sell breeding stock at three to four months of age, and I sometimes have some explanation to do when lambs drop tapeworm segments right in front of customers, or when the customers discover it after they get the lambs home.

Why is it then that tapeworms do not cause harm to a lamb, and do not even stifle growth? There are several reasons:

Tapeworms live in the small intestines and do not, unlike many nematodes, penetrate and damage the gut wall in a substantial way. They therefore do not cause diarrhea, perhaps just a little loose stool.

The intermediate host, the pasture mites, limits exposure. That means the level of infection stays modest. On the other hand, nematode or roundworm infections, including barber pole infestations, can be massive because larvae are ingested directly. That can overwhelm a lamb.

The little nutrients a few tapeworms require are tiny in comparison to the nutrients a fat and heavy lamb consumes every day.

On rare occasions, tapeworms do cause a problem in lambs. Chances are, though, that they are only a secondary cause. There may be other worms affecting the lambs, or the nutritional status of the lambs may be poor. In short, if your lambs are heavy and healthy and have lots of good pasture, and you see tapeworm segments in the stool, do not worry about it. Having all that said, keep an eye on your lambs anyway in case an individual lamb might develop problems. Observation is always a good management tool, just as the old German farmers' saying states: *Das Auge des Herrn mästet das Vieh.* (The eye of the master fattens the cattle.

*Sheep can serve as intermediate hosts for certain canine tapeworms, but that topic is outside the scope of this article. Here I am speaking only about the tapeworm that affects sheep and goats, *Moniezia expansa.*

