



# Double Trouble!

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Small ruminants can be infected with many kinds of internal parasites. In fact, most fecal samples will show mixed infections. With that said, there are two parasites that producers should be most concerned about. They are barber pole worm and coccidia. I call them double trouble!

## The Barber Pole Worm

The barber pole worm (scientific name: *Haemonchus contortus*) is the most common worm to infect small ruminants in warm, moist climates. It is also the deadliest. Adult worms live in the abomasum (true stomach) and suck blood. Blood loss causes anemia (pale mucous membranes) and sometimes “bottle jaw,” an accumulation of fluid under the jaw (called submandibular edema).

Other symptoms are more generic and include loss of weight and body condition and poor appetite. The barber pole worm does not cause diarrhea like other worms. It can cause sudden death or a more prolonged infection that impacts performance and may also result in death.

Small ruminants get infected with barber pole worms when they eat the infective third-stage larvae from the pasture. Larvae are the immature form of the worm. Once inside the animal, the larvae develop into adult worms that suck blood and lay eggs. More animals, small paddocks, long grazing periods, and short rest periods all contribute to high levels of pasture infectivity and disease outbreaks.

Many factors make barber pole worms challenging to control. The worms have a short direct life cycle. Female worms are very prolific egg layers. The parasites can go into a “hypobiotic” (arrested) state to ensure survival over winter (or other adverse climatic conditions). Worse yet, the worms have developed varying degrees of resistance to all of the drugs (dewormers) meant to kill them.



**Barber pole worms can cause anemia (above) and “bottle jaw” (below).**



Young animals (less than 6 months of age) and nursing mothers are most susceptible to barber pole worm infections. Although any animal that is thin and underfed is at great risk. Sheep (especially) and goats eventually develop immunity to the barber pole worm, but it takes time (and continuous exposure) and is reduced at the time of birthing (this is called the periparturient egg rise). Infections with the barber pole worm are best controlled with good management, nutrition, and genetics, using dewormers only when necessary to treat clinical disease.



**Coccidiosis causes diarrhea and ill thrift. It can permanently “stunt” lambs/kids.**



## Coccidia

The other parasite of great concern is coccidia (scientific name: *Eimeria* spp.) It is not a worm. It is a single-celled protozoa that can only be seen with a microscope. Coccidia have a more complex life cycle than most worms, involving both sexual and asexual reproduction. The infective form is a sporulated oocyst (egg). Animals get infected when they ingest fecal matter from bedding and other contaminated surfaces.

Coccidia damage the lining of the small intestines, which affects the absorption of nutrients. The most common symptom is diarrhea (scours). Affected animals usually have an unthrifty appearance, thin and gaunt with rough hair coats and dirty backsides. Some animals that are successfully treated for coccidia may remain poor-doers, due to the intestinal damage caused by the parasite.

Unlike worms, there are additives (coccidiostats) that can be put in the feed, mineral, milk replacer, and/or water to help prevent outbreaks of coccidiosis. These only work if the animals consume enough of the coccidiostat and it is fed at the right time (at least 3-4 weeks before the risk of an outbreak).

More important than coccidiostats is good sanitation, nutrition, and management. Dirty conditions and poor management are what cause disease outbreaks. Lambs/kids develop immunity to coccidia earlier than the barber pole worm, but their immunity can easily be overwhelmed by a high level of exposure to the oocysts. Comorbidities also make lambs/kids more susceptible.



Images by Susan Schoenian

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