Gastrointestinal Parasites in Sheep and Goats: Frequently Asked Questions
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Introduction
Gastrointestinal parasites (also called worms, or helminths) are commonly found in sheep and goats worldwide. When present in low numbers in the gastrointestinal tract, these parasites cause no harm to the host animal (the sheep or goat that carries them). Parasites cause disease when they are present in large numbers or when the host animal is weakened by another disease or by poor nutrition. Damage to the host occurs when the parasites attach to the lining of the gastrointestinal tract and ingest blood – large numbers of parasites can create anemia from blood loss. Damage can also occur when the parasites attach to the lining of the gastrointestinal tract and cause it to become inflamed. This can result in impaired ability of the host animal to absorb nutrients, causing poor body condition (thinness), poor growth rates, low milk production, and / or poor haircoat or fleece growth. Some parasites cause a reduction in appetite by the host animal.

How are parasites are transmitted from animal to animal?
While in the gastrointestinal tract, parasites lay microscopic eggs that are shed in the animal’s feces. Once on the ground in the feces, the parasites mature into larvae that are capable of infecting another animal. The time needed for this maturation step is quite variable, but in general, it occurs over a matter of several days during warm weather. During very cold weather, maturation can be delayed for weeks to months. The larvae are capable of traveling a small distance (millimeters to centimeters) away from the fecal matter and reside on nearby blades of grass or other plant matter, such as hay that is on the ground. Larvae can be spread by animals walking in their manure and stepping onto nearby grass or feed, which is then ingested by another animal. [Note that contamination of feed by fecal matter is the primary means by which these parasites are introduced into the host – this is a critical point that we can control with good management.] Once ingested by the sheep or goat, the parasite matures in the gastrointestinal tract into the adult form, and egg laying resumes. Most damage to the host is caused by the maturing larvae and the adult forms of the parasites.

Can the parasites from sheep affect goats, and vice versa?
Sheep and goats carry parasites that can be transmitted to each other (across different species). However, sheep and goats cannot become infected by parasites from cattle, horses, pigs, llamas, alpacas, or birds, nor can they transmit parasites to these species.

What are some of the ways that farm management can be changed to limit parasite problems in a goat herd or sheep flock?

1) Don’t feed hay or grain off of the ground. Instead, feed from racks or feeders, and keep these clean. The goal is to limit fecal contamination of feed. Goats have a tendency to want to climb into or on top of feeders, so these may need to be covered or modified to
prevent them from stepping in or defecating into the feed. Spilled feed should be raked up and discarded, composted, or fed to cattle, horses, or poultry (sheep and goat parasites can’t harm them). Similarly, water troughs and bowls must be cleaned regularly to limit transmission of parasites in water.

2) Don’t overgraze pastures. If your animals are allowed to graze pasture, move the animals to new pasture (or, using electric fence, onto new sections of pasture) every 7-10 days. Once a pasture has been grazed, if you mow it short and remove the clipped forage, exposure to sunlight for 2-4 weeks will dry out and kill many of the remaining parasite larvae, making the pasture safer for sheep and goats to return to graze. Alternatively, you can move horses, cattle, pigs, or poultry onto the pasture – when these other animals ingest parasite larvae from sheep and goats, the larvae will die without causing harm to the “new” animal that ingests them. The sheep and goats can be returned to this pasture in about 4 weeks.

Goats do very well if allowed to “browse” - that is, eat the leaves and stems of shrubs and tall weeds at shoulder height to the goat. The parasites shed in feces will not contaminate the plants at this height off of the ground.

3) Avoid overcrowding – Many parasitism problems have some basis in overstocking, or simply having too many animals on a given section of land. This is particularly true when sheep and goats are grazing pastures.

4) Use deworming medicine (called anthelmintics) wisely. Your veterinarian can test the feces of your sheep and goats to determine the level of parasitism present in your animals, and he or she can then custom design a deworming strategy to fit your situation. There is no single schedule for deworming treatments that fits all of the needs of all farms and ranches. To avoid treating your animals when they don’t need it, and to avoid delaying treatment until animal health is compromised, consult with your veterinarian on how best to use these medicines. Haphazard use of deworming medicines can induce resistance to the medicine in the parasites, and the medicines may permanently lose their efficacy for your animals.

5) Avoid malnutrition. Sheep and goats are far more capable of coping with gastrointestinal parasites if their nutritional needs are met. Feeding adequate amounts of protein to these animals is particularly important. Your veterinarian can help you to design a nutritional program that best fits your animals needs.