COMPARATIVE HEALTH CONCERNS FOR SHEEP AND GOATS

Kevin D Pelzer DVM, MPVM
Virginia Maryland Regional College of Veterinary Medicine

There are many disease agents and management protocols that are similar for sheep and goats. Likewise, there are several differences between the species when it comes to clinical signs, treatment and management of these health issues. I frequently receive calls related to the following health issues shared among sheep and goats.

Copper
Copper is an essential mineral for both sheep and goats. Copper deficiency may result in anemia, decreased milk production, reduced fertility, increased incidence of disease and decreased natural resistance to parasites. Decreased growth rates and joint problems are observed in growing animals. The most commonly known condition resulting from copper deficiency is swayback or enzootic ataxia in lambs and kids which produces an ascending paralysis.

There is an interaction between dietary copper and molybdenum. It is recommended that the dietary copper to molybdenum ratios be 5:1 to 10:1.

Sheep are sensitive to copper toxicity. As a result, sheep should only be fed mineral formulated for sheep. Likewise, sheep should only be fed products designed for sheep, e.g. milk replacer. Sheep consuming goat or cattle mineral may develop copper toxicity.

Goats fed sheep mineral are likely to be deficient in copper depending on the other feedstuffs in the diet. Goats should be fed goat mineral.

Caseous Lymphadenitis, CL, Boils
Is a bacterial infection of both sheep and goats. The organism involved is Corynebacterium pseudotuberculosis. The organism produces abscesses throughout the body. The bacteria are transmitted through the rupture of abscesses, releasing the organism and the organism then enters breaks in the skin. The organism can cause abscesses within the lungs resulting in aerosolization of the organism and inhalation by susceptible animals. The organism is credited for being one of the major causes of chronic weight loss in both sheep and goats.

Diagnosis is made by culturing the contents of the abscesses. There is a blood test, Hemolysin Inhibition Test, which tests for the toxin produced by the bacteria. The advantage of the test is that it can test animals that are infected but not showing observable abscesses.

California Animal Health and Food Safety Laboratory System
West Health Sciences Drive - UCD
Davis, CA 95616
- requires 0.5 ml of serum (red cells spun down and removed before shipping)
- costs $4.50/sample if the animal resides in California, $7.50/sample for submissions from other than California
- submission forms and billing information can be obtained at (530) 752-7577
http://cahfs.ucdavis.edu/
Sheep: the majority of abscesses occur in the lymph nodes of the head but also in the internal organs like the liver, kidney and lungs. The pus in the abscess ranges from being very dry to thick pudding. The color is white to pale green. Vaccination, CaseBac®, is approved for sheep and has been effective in controlling the disease in some flocks.

Goats: the majority of abscesses occur in the lymph nodes under the skin but may also occur in internal organs. Most common places are under the jaw, in front of the shoulder and stifle. The pus may be fluid like, almost clear, with flecks of white pus to thick white sour cream texture. Vaccination: there is no approved vaccine for goats. There have been reports of anaphylactic type reactions when CaseBac® has been used in goats.

Parasites
Internal parasites – both sheep and goats are infected with the same worm parasites, Haemonchus or the barber pole worm causing the majority of problems. The FAMACHA system works well for both sheep and goats.

Dewormers Approved for:

Sheep
- Albendazole (Valbazen)
- Levamisole (Prohibit, Tramisol)
- Ivomec drench
- Cydectin Drench

Goats
- Fenbendazole (Safeguard)
- Morantel tartrate (Rumatel)

As a general rule, goats need 2 times the amount of dewormer as sheep. Consult your veterinarian when the dosage and withdraw times are not listed for the species you are treating.

Coccidia: The coccidia that cause problems in sheep are different than the coccidia in goats. However, both types of coccidia are transmitted and survive in similar environments. Treatment for coccidia is the same for sheep and goats; sulfad drugs or Amprolium, Corid®.

For control of coccidia, decoquinate, Decoxx®, is used in both species. Ionophores can be added to feed to increase feed efficiency as well as a preventative for coccidian. Monensin, Rumensin®, is approved for goats and Lasalocid,Bovatec®, is approved for sheep.

Lice: The species of lice are different for goats and sheep so they don’t share lice. The symptoms of lice infestation is the same for both species; intense itching, anemia, weight lose and hair or wool lose. Treatment involves topical application of either a permethrin or organophosphate.

Scrapie
Both sheep and goats are susceptible to scrapie. The estimated prevalence of scrapie in the eastern US is 0.52 or 52 sheep per 10,000 animals. The national average is estimated to be 20 sheep per 10,000 animals. An estimate for the prevalence of scrapie in goats is not available but is presumed to be very low. The problem with having sheep graze with goats is that if a case of scrapie is found in either species, the entire flock is considered exposed. In the case of sheep, the
clean up process entails blood testing to identify animals that are susceptible based on genetics and then a follow up third eyelid test. Susceptible and positive animals are then slaughtered. The clean up with goats however requires that all females be slaughtered as there is no pre-mortem test. The goat’s brain is then tested after slaughter.

**Listeria**
Both sheep and goats are susceptible to developing listeriosis. The organism, *Listeria monocytogenes*, is most often acquired through the environment. The organism lives in decaying forage, such as improperly ensiled silage, wasted hay around feeders, low areas that collect water or are boggy. The organism is thought to enter through breaks in the oral mucosa, lining of the mouth, and migrates up the nerve endings to the brain. Goats may be more susceptible to infections because of their nature to browse material that may damage the mouth. Animals close to one year of age are at increased risk due to lose of teeth. Sheep tend to respond to treatment better than goats and the earlier treatment begins the better the outcome.

**Foot Rot**
The organisms that cause foot rot, *Fusobacterium necrophorum* and *Dichelobacter nodosus* live in goat and sheep feet. This is important in that new animals entering a herd or flock can bring the organisms with them infecting the resident animals. Animals with over grown hooves and housed in muddy environments are at increased risk of acquiring and maintaining the infection. The damage to the feet, separation of the hoof wall from the foot, is the same for both species. Goats are less likely to show signs of lameness compared to sheep. As a result foot rot may “hide out” in goats. Treatment, trimming hooves, antibiotics, and foot bath soaks are the same for both species. Prevention is to quarantine new animals for 30 days trimming feet when animals arrive and prior to entering the flock. Keeping feet trimmed will help reduce foot rot as well as other foot problems. The vaccine is approved for sheep. I have used the vaccine in goats without any problems except for the usual abscesses at the injection site.

**Foot Scald**
A condition that affects the tissues between the toes, often causing swelling above the toes. Goats often walk as if they have broken their leg, sheep are not as lame. Treatment for both is the same, antibiotics and foot soaks.