

Foot Rot and Foot Scald in Goats & Sheep

Introduction

Foot Rot

Foot rot is a contagious disease of the hooves in goats and sheep. This disease is prevalent in the southern region of the United States. The South's wet and humid climate makes it conducive for foot rot and foot scald. Foot rot is primarily caused by the microorganisms *Dichelobacter nodosus* and *Fusobacterium necrophorum*. *Dichelobacter nodosus* can be found in contaminated soil.

Foot Scald

Foot scald, also referred to as benign foot rot or interdigital dermatitis, is an inflammation between the toes caused by *F. necrophorum*. Persistent moisture on the skin between the toes can increase susceptibility to foot scald. However, foot scald does not seem to be contagious. A significant proportion of the herd will likely show signs of the disease under ideal environmental conditions. Foot scald often precedes hoof rot.

Foot scald and foot rot outbreaks occur most often during persistent rainy weather along with high temperatures, when animals walk across wet pastures and muddy soil. If not treated, these animals can become



Foot Rot on goat

permanently infected. During the rainy season, infected animals can contaminate the soil, which can increase disease transmission to other animals. Overgrown hooves will also predispose an animal to foot scald or rot. The disease causes stress to the animals and can affect weight gain, reproductive rates, and wool production. Foot rot and scald may incur additional costs for treatment and increased labor during an outbreak.

Introducing an infected animal into a non-contaminated herd can create herd contamination. Foot rot microorganisms can also be carried to soil on visitors' boots. Keep visitors out of pastures or request them to wear disposable or rubber boots when walking through pastures. This is a biosecurity measure that can help minimize farm-to-farm transfer of *D. nodosus* and *F. necrophorum*. Reports indicate that direct transmission of foot rot can occur



Goat limping as a sign of foot rot

between cattle, sheep, and goats that are in/share the same pastures.

Research has shown that genetic makeup helps determine whether an animal is resistant or susceptible to these hoof problems. Among sheep, the Merino breed is more susceptible, and the Gulf Coast breeds are more resistant. Boer goats are more susceptible, and the Spanish and Kiko breeds are more resistant to foot rot and foot scald.

Diagnosis, Treatment, and Prevention

Diagnosis

The first signs of hoof rot or scald are limping, holding limbs above the ground, grazing on knees, and reluctance to walk. Foot scald is characterized by interdigital

inflammation. The skin between the toes is pink to white in color, raw, moist, and very sensitive to the touch. Foot rot can be mild or severe. The erosion of tissue between the sole of the toe and the hard outer hoof characterizes foot rot. Upon trimming the hoof, the outer shell of the hoof will be separated from the inner sole. Severe cases of foot rot may be accompanied by the presence of pus and a foul smell. Animals with severe foot rot might show fever, loss of appetite, with hoof deformity. Animals with chronic infections show a loss of body condition and decreased production, resulting in an unhealthy animal overall. Although foot rot and foot scald are common in small ruminants, they should also be inspected for other foot diseases or injury.

Treatment

- Isolate affected animals for treatment and trim hooves. Inspect for signs of rot or scald and rule out other possible causes of lameness.
- Treat the feet with a solution of 10 percent copper sulfate or zinc sulfate. Several products are commercially available. Use of 7 percent iodine on the feet is also effective.
- When a substantial number of animals in a herd are affected, the use of a footbath may be the best treatment option. Animals must stand in a zinc or copper sulfate solution to allow absorption into the hoof wall. Another option for whole-herd treatment is the use of absorptive pads saturated with the zinc or copper sulfate solution. The pad should be placed in a high traffic area that goats and sheep must pass through, such as a gate, lane, or water trough. When animals stand to drink at the water, hooves will be treated. Lameness is generally resolved within a couple of days after treatment.
- Antibiotic therapy, such as injections of long-acting penicillin or oxytetracycline, is effective.
- Keep treated animals in a dry environment for 24 hours after treatment. Hooves should be trimmed as needed to expose the infected tissue to oxygen.
- Maintain clean pens and barns.

Foot rot microorganisms can remain in the soil for several weeks. After animals have been treated, they should be transported to a clean pasture or



Absorptive pads saturated with zinc or copper sulfate solution in front of water trough. Hooves of goats standing to drink at the trough will be treated.

Prevention

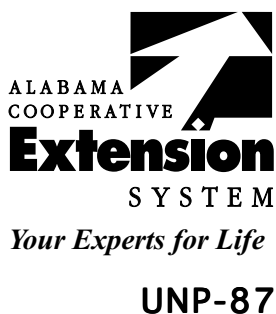
- Cull highly susceptible animals and enhance selective breeding for resistance to foot rot.
- Trim hooves regularly. Trimming prevents hoof overgrowth, which creates an environment for foot rot.
- Quarantine animals for several weeks after they arrive.
- Check animals for foot lesions before purchasing.
- Give animals a footbath upon returning from shows or after purchasing, and prior to their re-entry into the herd.
- Vaccinate sheep as a preventive tool for foot rot. A vaccine for foot rot in sheep is available. The Food and Drug Administration does not approve this vaccine for use in goats.

NOTE:

Ceftiofur and Neomycin are the only two antibiotics approved for use in goats. The other antibiotics mentioned in this article are considered extra-label products for use in meat and dairy goats. Consult a veterinarian before using extra-labeled products.

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