Foot Rot Can Affect Gain

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Rain has been abundant in most parts of Arkansas throughout the past few months. Along with the moist conditions, some producers have been dealing with an increasing number of cattle infected with foot rot. Foot rot is a common cause of lameness in cattle, but the prevalence of this disease often increases with moist weather and wet pasture conditions. Foot rot can be directly related to poor performance and decreased gains in cattle. A sore-footed and limping animal obviously cannot graze efficiently. One research study showed that gain on grazing steers affected by foot rot was decreased by 0.46 lbs/day compared to steers that were not affected.1 Feedlot studies have also shown similar performance loss, with one report indicating that gain decreased by 45 percent on steers affected by foot rot.2 Not only is foot rot economically important due to decreased performance, but treatment expense must also be considered.

Foot rot is primarily caused by infectious bacteria called Fusobacterium necrophorum. This pathogen is commonly found in the intestinal tract of cattle, and in the soil. It has been shown to survive in the soil for up to 10 months. For infection to occur, there must be a compromise to the integrity of the hoof. Moist or muddy conditions allow for the hoof and surrounding skin to soften, and then any abrasion by rocks, forage stubble, nails or wire could allow entry of the bacteria, resulting in infection. Incubation for this disease is approximately 5 to 7 days.

Foot rot can occur in cattle of all ages, and although it is a common cause of lameness in cattle, it is oftentimes over diagnosed. Foot rot is estimated to cause approximately 25 percent of the total lameness cases in beef cattle. Therefore, not every limping cow has foot rot. Remember to examine the foot carefully to determine the cause of lameness before treatment is rendered. Clinical signs of foot rot include a sudden onset of lameness with the affected animal limping on one or more limbs. This disease can be so painful that it may limit the animal to only touching the toe to the ground when trying to walk.

As shown in the picture, swelling and redness is noticeable between the toes and around the hairline of the hoof. The skin between the toes usually cracks open and a necrotic, foul-smelling discharge may be present. Aggressive and early treatment is indicated. If the disease is allowed to worsen, deeper structures within the hoof can become affected, leading to a poor prognosis for successful recovery.

Treatment should include both topical and systemic therapy. Treatment with a topical disinfectant can be applied directly to the hoof after the hoof has been cleaned. A systemic antibiotic injection should be administered and is typically successful therapy if provided early in the infection. Oxytetracycline (Liquamycin LA 200™, Bio-Mycin 200™, Duramycin 72-200™) is commonly recommended and should be administered at a dosage of 4.5cc/100 pounds of body weight for foot rot. Your veterinarian may also prescribe alternative antibiotics (Excenel™ or Nuflor™) if needed. Anytime antibiotic therapy is provided, the proper slaughter withdrawal period should be noted in case the animal must be salvaged.

Figure 1. Example of foot rot.*

Beyond treating the affected animal, attention may need to be given to the environment. If muddy conditions exist in the pasture, especially around hay rings, loafing sheds or mineral bunks, then scraping the muddy area or moving the bunk/feeder may need to be considered. Treated cattle may need to be kept in a clean, dry pen during recovery.

Vaccines are also available for foot rot prevention. Volar™ (Intervet) and Fusogard™ (Novartis) are vaccines that help prevent cases of foot rot in your herd. Prevention may also focus on eliminating the environmental factors that predispose cattle to this disease. For more information about diseases affecting cattle, visit your county Extension office. Δ

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