



# Texas Agricultural Extension Service

The Texas A&M University System

## Foot Rot in Beef Cattle

Foot rot is a term commonly used to include a variety of conditions affecting the bovine foot. It is a frequent problem of cattle, especially in poorly drained, muddy pens and pastures. The disease may be found in individual animals or may affect up to 80 percent of cattle in problem herds, resulting in severe economic losses.

### Causes and Contributing Factors

The most frequent cause of foot rot in cattle is *Fusobacterium necrophorum*, formerly called *Sphaerophorus necrophorus*, a bacterial organism widespread in the animal's environment, especially in mud and manure. Another bacterial organism accompanied by spirochetes has been incriminated as a cause of foot rot. Also, yeasts and molds have been suggested as contributing organisms.

Before the infectious agent can gain entry, a break in the skin or hoof must occur from such causes as sharp pieces of stone, metal, wood, stubble or frozen manure. Continuous exposure to mud or moist manure causes irritation and erosion. Excessive dryness of the hoof and skin cause cracking or injuries. Hooves that are not wearing properly also may contribute to foot rot if they have areas where filth collects and foot rot starts.

### Clinical Signs

Once the infectious organisms become established, they cause inflammation and necrosis of tissue, resulting in slight to severe swelling and extreme pain. The reddened swelling usually is more evident between the hoof and at the bulb of the heel, but sometimes extends up the leg. In older chronic cases, a smelly discharge may occur from the openings between the claws or around the hoof. The deeper structures of the foot may be involved.

The signs of foot rot in cattle include lameness, holding or raising of a foot, reluctance to move, impaired locomotion, loss of appetite and weight and reduction in milk production. Severe illness or death can occur in prolonged cases.

### Treatment

The affected foot should be cleaned, trimmed and inspected for the presence of a foreign body. A

veterinarian may examine the animal to be sure that other conditions such as virus diseases, founder or injuries are not involved. An antiseptic and bandage may be applied after cleaning and trimming and sulfonamides or broad-spectrum antibiotics administered to combat the infection. Stabling 7 to 10 days to enforce rest aids in recovery.

In commercial cattle that are difficult to handle, sulfonamides, tetracyclines or other recommended drugs may be placed in the feed or drinking water. Animals also may be walked through a 2 to 5 percent solution of copper sulfate, 4 percent formaldehyde solution or other medicated foot bath twice daily for several days. If foot baths are not practical, animals may be walked through a mixture of powdered copper sulfate and slaked lime. Ask your veterinarian for specific recommendations.

In some severe cases where the joint is involved, removal of one claw by a veterinarian may be necessary to salvage the animal. After recovering, cattle usually can function well with one claw.

### Prevention

Preventive measures include removing sources of injury and keeping feet dry and clean. Mudholes should be filled and stagnant pools drained or fenced off. Lots should be well drained and manure removed frequently to reduce muddy filth. Areas where cattle walk frequently, such as lanes or gateways, should be graded or filled to provide a well-drained pathway. Around feed bunks or watering troughs, a concrete standing platform will help keep feet dry. Lime or phosphorus fertilizer along the feed bunk also can be used as a drying agent. In valuable cattle and bulls, regular foot care including trimming of feet as needed will help prevent foot diseases and injuries.

Foot baths have been used in prevention of foot rot with some success. Copper sulfate solution, formaldehyde solution and air-slaked lime have been used. Sand or lime in the bottom of a foot bath will help prevent slippage. However, foot baths are impractical for most beef herds. Chlortetracycline in the feed also has been used to reduce the incidence of foot rot.

Foot rot can cause economic losses in a beef herd. Early treatment, control and prevention under the direction of a veterinarian will help to keep losses to a minimum.