



Vet Call

► by **Bob Larson, DVM**, University of Missouri-Columbia

Lameness in cattle

Lameness in cattle can be due to many different causes.

Foot rot

One of the most common causes is an infection of the skin and soft tissue above the hoof known as foot rot. The bacteria that cause foot rot are present in soil and are very common in cattle pens. In order for this bacteria to invade the foot, a break in the skin must occur first. Injury that allows infection may be due to rocks or rough ground, crop residue stubble, or extreme dryness. Wet and muddy areas may also be a problem. Prolonged exposure to wet ground can cause the skin to become soft and more easily injured.

A lame animal should be confined in a squeeze chute where the foot can be lifted and carefully examined to make an accurate diagnosis. It is very easy to mistake a puncture wound or another problem for foot rot.

In most cases of foot rot, treatment with antibiotics will resolve the problem in a matter of days. In a few cases, the infection can invade nearby joints, which makes recovery less likely. Prevention of outbreaks of foot rot is primarily directed toward maintaining clean pens and designing watering and feeding areas to prevent the buildup of mud.

Occasional, individual cases of foot rot are probably unavoidable. The use of feed additives such as iodine and antibiotics have not been consistently successful for prevention.

Heel warts

A disease called hairy heel warts or digital dermatitis can also occur on the feet of cattle. The area directly behind the heels is most commonly affected, but the area between the toes can also be affected.

This skin disease is common in dairy herds. Although it is rare in beef herds, it does occur in feedlot cattle. It is characterized by very painful, raw areas that may look like warts and may have long hair-like growths.

The current theory is that two or more microorganisms work together to cause the disease and that these organisms thrive in

manure-contaminated water. Housing that minimizes the time spent standing in water is the best prevention. Footbaths with antibiotics are used for treatment in dairies.

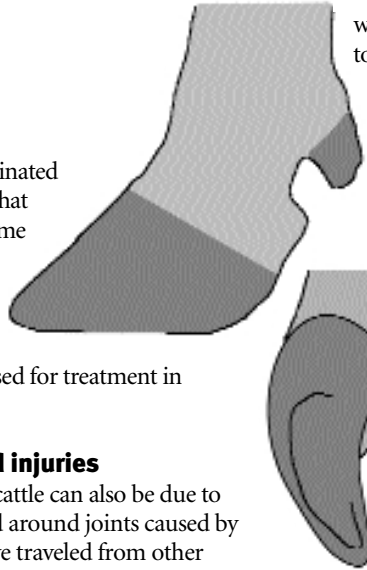
Infections and injuries

Lameness in cattle can also be due to infections in and around joints caused by bacteria that have traveled from other infections in the body. *Mycoplasma bovis* (*M. bovis*) is an organism that is found in the lungs of some cattle with prolonged cases of pneumonia. This organism can travel through the bloodstream and infect joints and tendons, causing severe lameness. Many antibiotics do not kill the organism, and treatment of cattle with lameness due to *M. bovis* is often not successful.

Lameness can be caused by injuries to the foot or leg. Puncture wounds from nails or glass can cause damage to the hoof itself or to the soft tissue around the hoof. Puncture wounds are often accompanied by a great deal of swelling and may appear similar to foot rot. Damaged or poorly maintained loading chutes, alleys or fences with sharp protrusions can injure feet and legs.

Toe abscesses are most common in calves in confinement, particularly where sorting pens are abrasive and the cattle have soft hoof material. Acidosis may be a factor. Behavior is considered to be a factor, since cattle that become excited easily may scramble on the concrete of the treatment or processing areas, causing abrasions of their toes, which allows infections to occur. Toe abscesses are treated by nipping off the tip of the toe to allow drainage, administering antibiotics and placing the cattle in areas with clean, solid footing.

Sole abscesses are less common but are more difficult to treat than toe abscesses. The sole must be trimmed, and the abscess must be opened to allow drainage. A



wooden block is glued to the opposite toe to keep the affected toe from bearing weight. Sole abscesses are most common on the inside toes of the front legs and the outside toes of the back legs and may be related to incidences of acidosis.

Laminitis is the foot problem most commonly associated with acidosis. In most cases of laminitis, the cattle are on high-concentrate diets or on stalk fields with a lot of residual grain. Severe cases of laminitis in cow herds will result in the animals' being culled.

Structural problems

Structural problems can cause lameness. Pigeon toes, long toes and straight hocks are examples of some of the more common structural problems. Corkscrew hoof is a genetic problem, and any animal with that condition should be culled from the breeding herd.

The hind leg should have an acceptable set to the hock as viewed from the side. The range of acceptability is 120° to 155° with the ideal of 140°. The post-legged condition, when rear legs have a greater than 155° set to the hock, is common and a serious skeletal defect in beef cattle. Exceptionally straight hind legs are often associated with steep pasterns and straight shoulders.

The bowlegged condition of hind legs is associated with a narrow placement of the feet and a disproportionate amount of weight on the outside claw, which can lead to lameness. When evaluating front-limb structure, cattle should have an adequate slope to the shoulder (45°-50°), and the legs should be acceptably straight when viewed from the side and front. Front legs that bow inward at the knees 10° or less are considered acceptable, but knees that bow outward even slightly are unacceptable.

E-MAIL: larsonr@missouri.edu