

Defeat

Lameness

Discovering problems early and targeting appropriate treatments can limit lameness losses within the breeding herd.

by *Corinne Patterson*

Other problems do exist that can express swelling. Typically they arise in a particular area, like frostbite in the northern states or fungus problems in southern states. But, in general, the top three are more commonly found across cow country.

Lameness without visible swelling covers a broader range of problems that can be climate-, management- or environment-related. Cracks or splits in the hoof wall in dry climates or abscesses underneath the hoof wall in rocky environments are examples.

“Problems such as hoof wall cracks and sole bruises can make conditions ripe for development of an abscess under the sole. Early on, sole abscesses are not usually associated with swelling of the foot,” Van Metre says. “If the abscess is not drained

promptly, however, the bacteria in these abscesses can invade into the underlying bones or joints of the foot — then you have a swollen foot and a very lame animal.”

Identifying problems

Identifying problems early is of the utmost importance, Van Metre says. Many times if the herd is being checked on horseback, it may be hard to notice lameness cases. However, Van Metre recommends producers move the cattle around and watch for slow movers. By moving a potential lame animal to solid ground where the foot can be examined, a closer look may share some insight into a potential problem.

“Look at all four of the legs and feet from behind,” he recommends. One of the most visible signs of swelling can be seen in the dewclaw region. Dewclaws are only embedded in the soft tissue and are not anchored well, so the dewclaws on the swollen foot will be spread farther apart than on sound feet, Van Metre points out.

Early diagnosis and correct diagnosis can be the difference between an animal recovering or being a loss to the breeding herd, says Angus producer Greg Rathbun, Moses Lake, Wash.

Producer perspective

Rathbun Angus Ranch is located in native desert country, where only sagebrush and drought-tolerant grasses survive. With only 250 acres of irrigated pasture, the cows and calves must thrive in range conditions.

Rathbun says, like nearly all cattle operations, his family’s ranch deals with feet

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There have been several studies — both in North America and in Europe — indicating that if a bull or cow is lame, almost 90% of the time it’s due to a problem in the foot, says David Van Metre, veterinarian and clinical sciences professor at Colorado State University (CSU), Fort Collins.

If an animal is limping, it’s likely attributed to a problem at or below the fetlock joint, also known as the ankle, he adds. “So, right away we really need to focus on the foot.”

Divide and conquer

Van Metre recommends dividing lameness into two broad categories — lameness with a swollen foot and lameness without a swollen foot. Distinguishing the difference, he adds, helps target treatment protocols more appropriately.

“For example, foot rot is associated with a swollen foot, and antibiotics would be a good treatment,” Van Metre says. “However, a lot of people just throw antibiotics at lame cattle. If it’s something like a crack in the hoof wall or a sole abscess, it’s not going to get any better with any antibiotic. So that thought process of splitting and categorizing lameness helps to prevent some inappropriate treatments.”

The list of causes associated with visual swelling is relatively short, Van Metre says. He points to three main causes. “Probably the most common is foot rot. The second is injury or infection that is either deep into the hoof wall or deep into the skin. The third cause is very rare, and that’s a fracture of one of the bones of the foot.”



► A sign of swelling is commonly found in the dewclaw region of the foot. Because dewclaws are only embedded in the soft tissue and are not anchored well, dewclaws on a swollen foot will spread apart like seen in this right hind foot.



► A dry, rough climate can make animals prone to sand cracks. A sand crack can cause lameness without showing signs of swelling.

► **Left:** If a bovine is limping, David Van Metre, veterinarian at CSU, says it is important to bring the animal in for treatment. A sole puncture, like this one, may not be visible through swelling. If left to linger without treatment, it could cause joint infection with potential for permanent lameness.

PHOTOS COURTESY OF DAVID VAN METRE



► Van Metre says if the swelling is symmetrical down the long axis of the leg, it oftentimes warrants treatment for foot rot. Foot rot is a disease of the midline of the foot — the skin in between claws. As a result, the swelling seems to be symmetrical from side to side.

problems off and on. While the cows and calves reside on native range, Rathbun Angus has a bull development center built on a rocky hillside. Approximately 130 bulls are developed before the fall sale and spring turnout into mainly commercial herds. With bulls traveling nearly ½ mile from feed to water within the development center, good feet are crucial.

Rathbun says his most common lameness culprits fall into the two categories described by Van Metre.

Foot rot is one dilemma Rathbun deals with on a limited basis. “That’s where you get swelling in the hoof, and it’s fairly easy to doctor with antibiotics,” he says.

The rocky hillside where the bulls are developed poses another issue for Rathbun. This problem doesn’t express itself through visual swelling. “We have large stones that are both on the surface and under the surface in our bull development lot,” he says. “At times of the year when the ground conditions are just right, we will get bruising of the feet. And when we get a foot bruise, typically the foot will then abscess up in the hoof. At that point we have to go in and cut out the abscess. We have had a very high success rate of curing those as well — as long as they are caught in a timely manner.”

To monitor foot health, Rathbun walks through the bulls, making them move for

observation, once or twice a week. In the case of a suspected bruise, Rathbun brings the bull that appears to have a foot problem into the chute. He says, "If you don't see swelling, you can take a pair of old large-mouth pliers, or something like that, and apply pressure to the bottom of the hoof and see if there's any tenderness down there. Typically, if it's a bruise you can find tenderness down in the hoof.

"If you don't identify it early, either with foot rot or with the bruising, the infection will move up into the joint," Rathbun says. "If the infection has moved up into the joint, we have not been successful in saving any of those bulls. During some of our early years

up here on this ranch, we hadn't had a bruising problem previously, so it took us a while to identify it."

While treatment for some foot problems are expected, Rathbun says the cow herd must maintain structural soundness without assistance. "The only prevention measure we do in our cow herd is culling. If we have a cow that's not naturally going to wear her toe down in the natural grazing out on the desert range that we've got, then we haul her off. Where we are selling genetics, it's very important that we are not selling that slight structural incorrectness to somebody else. Also, we wouldn't be retaining a daughter from a female like that."

Rules of thumb

Following a few tips when monitoring and treating lameness issues can be helpful.

Van Metre has seen many cases of foot rot. "If a person is treating with an appropriate drug against foot rot, you ought to see resolution of that case within a week," he says. "The case should be essentially cured, if not markedly better."

If the case isn't better in seven days, the animal could be experiencing infection deep into a bone or joint, which Van Metre says can be difficult to treat with antibiotics. It may be time to call in a veterinarian.

"[Veterinary assistance] prevents what I

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call antibiotic roulette, where someone tries penicillin for a week and that doesn't work, so then they try tetracycline for a week. When that doesn't work, they go to some other drug for a week, and then that doesn't work," Van Metre says. "They are pumping a lot of drugs and getting a lot of residue into that animal, and the animal is losing weight."

Another common problem occurs during breeding season. Bulls can lose their respect for fences when there are cows in heat on the other side.

"Things like barbed wire cuts on the limbs can be very problematic. My rule of thumb for wounds — if it is a wound that makes an animal lame, that defines it as an emergency," he says. "Cattle aren't wimps, and if there's a cut that causes the animal to limp, it needs veterinary attention as soon as possible."

Van Metre compares urgency in treatment of cattle lameness to human treatment of cuts or soreness in a foot. "If you are walking down the beach and you scrape your heel, it might sting a little bit, but probably all you do is ignore it or slap a Band-Aid® on it and go on your merry way. If you are walking on the beach and you step on a rusty nail, puncture it all the way into your heel bone and the next day you can't walk, you aren't going to just sit and ignore it. You are going to go to a doctor.

"The same thing should apply to bulls," Van Metre continues. "If they have a visible wound or a puncture wound in the foot that has caused them to be lame, it's time to get help. If the problem is ignored for long it can result in the spread of infection into the bones and ligaments, and that can be very hard to treat. As small and as inconsequential as it may seem on the surface, if it's making them limp, there's something going on."

Breeding for structurally sound cattle and developing them with good management in mind will continue to play a role in Rathbun Angus. A part of good management practice includes monitoring foot health closely.

"Look at the feet and legs on the bulls often. When you do identify a problem, doctor it early," Rathbun warns. "If you are not sure what the source of the problem is, have a vet come out. Once the infection has gone into the joint, typically the bull is no good and that's quite a value loss on that animal. But, if you can catch it early, they are highly treatable."

