

Bovine Newsletter

Lameness



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May 2020

Bovine Lameness

Lameness is a major cause of not only welfare concerns but also economic loss. It is one of the leading causes of culling in dairy operations and can have a major impact on productivity in beef operations.

In order to treat lame cows we first need to be able to identify them. A number of different lameness scoring systems have been developed, we use the following scale:

Lameness Score 1: Animal is not lame, posture and gait are normal.

Lameness Score 2: Mild lameness, the animal will show an arched back when walking.

Lameness Score 3: Moderate lameness, the animal will have an arched back while standing and walking. Her stride is often shortened on the affected limb.

Lameness Score 4: Very lame, The animal will display a visible limp, with reduced weight bearing on the affected limb

Lameness Score 5: Severely lame, the animal can't bear weight on the limb. At this stage the animal is reluctant or unable to stand.

A good video with examples of lame cows can be found at:

<https://bit.ly/bovinelameness>

As it was made in Australia they have a slightly different scoring system than the one we use. It doesn't matter which scoring system you choose to utilize as long as you are consistent and everyone understands what each grade represents.

Bovine lameness can be divided into two major categories: foot/claw lameness and upper limb lameness. Problems in the foot are the most common cause of lameness in cattle. Upper limb lameness does occur but at a lower frequency. As lameness is such a broad topic this article will focus specifically on lamenesses of the foot. Even if we limit ourselves to foot lamenesses there are still a large number of diseases that can affect the feet of cattle. We will look at some of the most common including: sole ulcers, white line disease, interdigital dermatitis and digital dermatitis.

Sole Ulcers

Sole ulcers are most commonly seen in heavy, high yielding, confined dairy cows. They can also be seen in yearling beef bulls on a high plane of nutrition. Sole ulcers are the result of subclinical laminitis. Laminitis makes the bone unstable within the hoof capsule and it is able to sink, crushing the soft tissue between it and the underlying sole. This is why we tend to see sole ulcers in the areas of the hoof that bear the most weight, like the lateral claw of the hind-limb, and the medial claw of the forelimb. The crushed tissue dies away, and the amount of tissue that dies will directly correlate to the severity of the ulcer. Ulcers can range from a discolouration on the sole to a large defect filled with granulation tissue. To treat a sole ulcer the foot should be trimmed appropriately and a block can be applied to the opposite claw to alleviate weight bearing on the affected side.





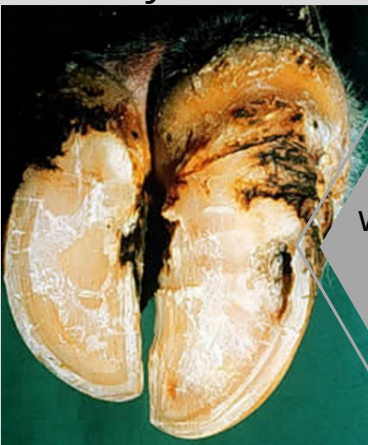
Discolouration on the lateral claw consistent with a sole ulcer



A sole ulcer that has resulted in a defect in the sole

White Line Disease

Similar to sole ulcers, white line disease is seen most often in animals with high levels of concentrates in their diet. High yielding, confined dairy cows are particularly affected. White line disease is the separation of the hoof wall from the sole typically seen in the heels. Depending on the severity of the separation of the wall and sole there may or may not be lameness. Mild white line disease can be found during a routine trim. The real problem occurs because the separation allows debris to migrate up the inside of the hoof wall. This can result in an abscess. The abscess will cause lameness, swelling at the coronary band and can penetrate into the deeper structures of the hoof. When treating white line disease the abnormal hoof will need to be pared away until you reach an area where the white line is normal and any abscesses have been opened to allow the pus to drain.



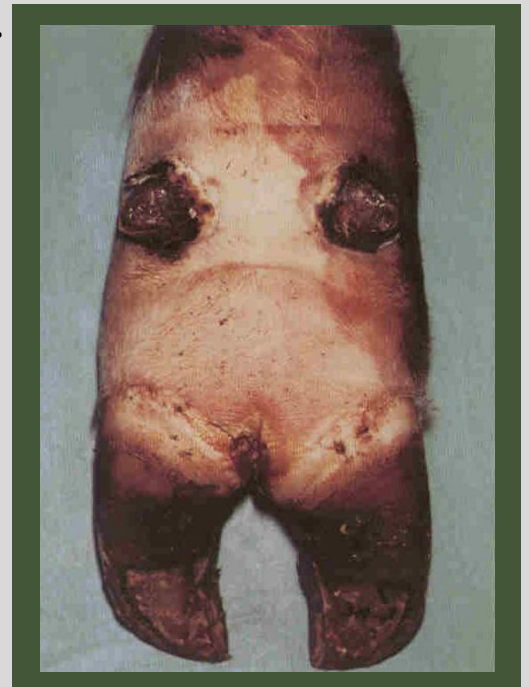
Early white line disease where you can see separation between the sole and hoof wall.

A case of white line disease where debris has tracked all the way up the inside of the hoof wall to the level of the coronary band.



Interdigital Dermatitis (Footrot)

Interdigital dermatitis is seen most often in pastured animals during wet conditions and occasionally in free stall dairy barns. The wet conditions or constant exposure to manure and urine will damage the skin, particularly in the interdigital space. The damaged skin acts as a point of entry for bacteria that can be living in the environment. Once the infection is established the animal will present with redness and swelling of the distal limb. Because there is swelling in the interdigital space the claws appear separated. The swelling is typically evenly distributed between both claws. Most of the time a single limb is affected. If the infection is not addressed it can penetrate into the deeper structures of the foot such as joints, bones or tendons. Affected animals typically have a fever and poor appetite in addition to their lameness. Fortunately this disease is relatively easy to treat as systemic antibiotics (such as oxytetracycline) and pain management often result in a significant improvement within a couple of days, so long as none of the deeper structures of the foot have been affected.



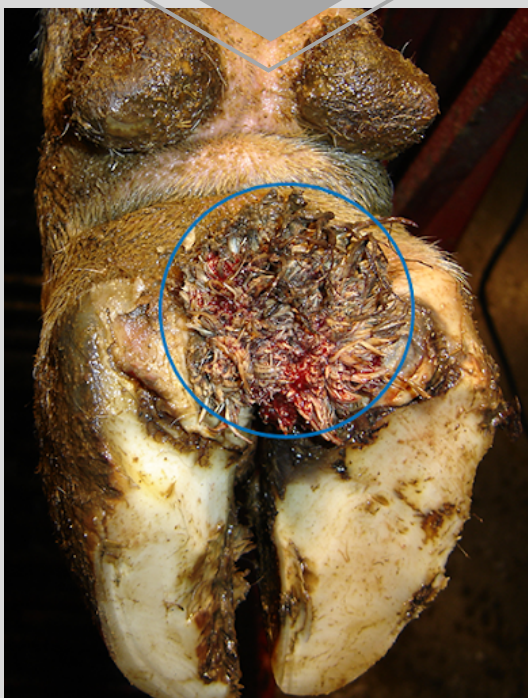
Digital Dermatitis (Strawberry Footrot)

Digital dermatitis is a contagious disease that affects the skin on the back of the foot above the interdigital space. If a cow has not been exposed to this condition previously, then she will have a poor immune response. This means that lesions are more common in heifers and if an infected animal is brought into a herd that has not historically had the disease, an outbreak can occur. In an affected animal, you can see a proliferative mass that resembles a wart or an area where the skin has been eroded. Though they look very different, these are both the same disease. Typically only a single foot will be affected, you will see the animal resting the affected limb while standing, but they tend to walk with little lameness. Digital dermatitis is treated with topical tetracyclines or foot baths.

Erosive lesion



Proliferative lesion.



Our veterinarians and technicians can help you with any veterinary services required by your herd, including diagnosing and treating lameness problems. We will be maintaining biosecurity and social distancing at farms, while performing procedures that support the agricultural supply chain, in accordance with Ontario's COVID-19 Emergency Order.

www.centralontarioveter.com

