KIRKTON
BOVINE SERVICES

March 2019

DAIRY NEWSLETTER

Digital Dermatitis

Aka Strawberry Foot Rot or Hairy Heel Wart

With topics of lameness and biosecurity being on everyone's minds due to the latest proAction updates, this month's newsletter will be a brief review of digital dermatitis, aka "Strawberry foot rot" or "Hairy heel wart".

What is it?

Digital dermatitis is a contagious disease of the foot and one of the most common causes of lameness in dairy cattle. The disease is caused by a bacterial infection of the skin at the rear of the foot and between the claws. The infection is made up of various strains of *Treponema*, as well as other contributing bacteria, which may vary from farm to farm. Most commonly, the infection is seen in the rear feet, but may also be seen in front feet. The infection can cause lameness for up to 4 months and has been associated with increased lying time, shorter feeding times, reduced milk yield and a larger interval between calving to conception. Digital dermatitis can go through various clinical stages, from acute to chronic, as seen on the illustration on page 2. Once a cow becomes chronic (M4) with digital dermatitis, it is very hard to completely cure her of the disease. Digital dermatitis is highly contagious, and when left unchecked can rapidly spread to effect up to 70% of the herd.

Risk Factors

The biggest risk factor for digital dermatitis is poor hygiene. Cows standing for extended periods of time in a wet slurry have a high risk of contracting digital dermatitis. Damage and trauma to the foot due to abrasive surfaces can also facilitate bacterial invasion. There is individual cow variation in susceptibility, which may be linked to genetics, foot conformation and immune system strength. Being that it is a contagious disease, the introduction of new animals carrying bacteria on their feet is a risk for farms that are naïve to it. On that same note, boots and hoof trimming equipment can be another source of contamination. Review your biosecurity protocols with your herd veterinarian to ensure that you are minimizing your risk.

Treatment

Digital dermatitis is best treated in the active M1, M2 and M4.1 phases in which a painful ulcer is seen at the rear of the foot or between the toes. Topical treatment with oxytetracycline as a paste or wrap is the most common form of treatment. Wraps should be left on for no longer than 24 hours, as manure contamination within the wrap is detrimental to healing. Non-antibiotic compounds containing heavy metals such as zinc and copper can also be used with the same method.

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Prevention

The main focus of prevention is hygiene; providing a clean, dry environment that is free of abrasive surfaces is key to lowering the risk of digital dermatitis. Footbaths can also be used to decrease the spread of new lesions and keep chronic lesions (M4) from flaring up. Foot baths can be filled with copper sulfate, formalin or alternated between the two. In order to get a proper coverage of each foot within the bath, a length of 10 feet is recommended. A strong mineral program has also been shown to increase the strength of the foot barrier, ask your veterinarian to learn more.

M1 is an early-stage ulcerative lesion (0–2 cm diameter)
M2 is an ulcerative painful lesion with a diameter >2 cm
M3 is the healing stage with a lesion covered by a scab
M4 is the chronic stage characterized by abnormal skin growth that is uneven and can form “hairs”
M4.1 is a chronic lesion with a small area of active ulceration.