

Bovine Digital Dermatitis (also known as Hairy Heel Wart and Strawberry Footrot)

Digital Dermatitis (DD) is a very painful, contagious disease causing wart-like areas on the back of the hind feet, on the bulb of the heels. It is a very common cause of lameness in dairy herds in United States and European countries, but at this stage is relatively uncommon in Australia. However, recent Australian research has found within affected herds, 6.2-32% of cows have lesions consistent with Digital Dermatitis.

Digital Dermatitis is caused by a group of bacteria called spirochaetes, *Treponema spp.*, *Borrelia sp.p* and *Dichelobacter spp.* These spirochaetes produce toxins which damage the skin.

The lesions of Digital Dermatitis can be of at least two distinct types, the erosive/reactive (strawberry-like) and the proliferative (wart-like) forms. A circular lesion 1 to 4 cm in diameter is generally seen on the skin of the heel or, less commonly, between the toes.

In the early stages of the disease, the hairs of the affected areas are usually erect, however the hairs later disappear. In the erosive form, the skin is covered with pus and pungent smelling material. Cleansing exposes reddish granulation tissue (strawberry) with a concave profile. The lesion is very sensitive and easily bleeds, but the soft tissue is not swollen. The animal is often very lame.

The proliferative form may give rise to the papillomatous type, which is characterised by a mass of hard, fine tendrils which can be several centimetres in length and cover a considerable area. These proliferations easily bleed if traumatised.

The diagnosis of Digital Dermatitis often based on a history in the lameness in the herd the clinical lesions found on affected cows feet.

Treatment at the individual cow level by cleaning and drying the affected foot, then spraying the lesion with an aerosol solution containing oxytetracycline. This is best carried out at the time of milking (preferably when the cow comes into the shed to maximize contact time. There are no milk or meat withhold periods associated with this treatment. Consistently good results are achieved if the lesions are treated twice daily.

Foot bathing for high prevalence herds (>15%), with 5% copper sulphate for 4 consecutive milking each week (replacing solution after 200 cows), can reduced the prevalence by 50% in some herds*. The ideal foot bath is 3m long, 0.5m wide and 0.15m deep and cows should have washed in the dairy prior to walking through foot bath.

*Poor footbath management and hygiene can potentially reduce the efficacy of treatment and increase the risk of spreading it further in the herd.

References:

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