

## *Causes of Bovine Lameness*

**Sole ulcer** :These are often difficult to treat and result from a pinching of the soft tissue between the wall of the claw and the pedal bone inside the claw. This is due to rotation of the bone either as a result of laminitis (inflammation of the soft tissue of the foot – often associated with SARA) or as a result of a poorly trimmed hoof causing unnatural rotation of the foot. They require trimming to reduce weight bearing, a block on the good claw and rest. They can take several weeks to fully heal.

**White line disease**:The white line is the weak point on the sole and is where dirt and stones can work their way up. Aggressive trimming is required to allow sufficient drainage of any infected tracts. Some require antibiotics and it can be useful to apply a block to the good foot. If you have lots of these look at the cow tracks and concrete surfaces – sharp stones and tight turns can contribute to an increase in white line disease.

**Digital dermatitis**: Digital dermatitis is a highly infectious but poorly understood problem affecting the majority of dairy farms in the UK. If you haven't identified digital dermatitis on your farm be very grateful and take great care if buying in stock to inspect and treat all feet before introducing them to your herd. Digital dermatitis is identified as a very painful lesion on the heel of the foot. They are often red raw. Treatment is to clean the lesion with water and then apply an antibiotic spray to the affected area. The lameness should resolve rapidly.If too many of your herd are affected to justify the time spraying each cow individually then you may need to use a foot bath. Several antibiotic foot baths have been used but none to date are licensed for use in milking cows. Therefore a 7 day milk withdrawal should be observed after using a foot bath. Discuss treatment options with your vet first. Control of digital dermatitis is by identifying sources of infection – common ones being accumulations of slurry either in yards or in gateways, on tracks etc. These act as a foot bath for infection potentially

contaminating any feet that stand in them. Ideally these need sorting but in the meantime preventative foot baths may help keep infection levels down. Regular formalin foot baths can help.

**Foul in the foot:** This is a bacterial infection (*Fusobacterium necrophorum*) causing inflammation of the skin and deeper tissues between the toes. It is seen as a swelling of the coronary band and of the skin around the heels. There usually needs to be initial damage to the skin to allow the bacteria to gain access. Stony and stubbly ground makes it more likely this damage will occur. It is more common in winter where cows are housed on straw and where cows have to stand in slurry. It is more common in the period immediately following calving due to possible suppression of the immune system, so it is vital to have clean calving boxes/yards. This is best treated early and antibiotics are usually effective. Foot baths, keeping a clean regularly scraped environment and maintaining cow tracks all help to reduce the incidence of this disease.

**Laminitis:** can affect one or all 4 feet. Usually associated with SARA. The cow is tender on the affected feet and may be reluctant to stand on concrete. It may manifest itself as a high proportion of cows showing a low grade lameness when locomotion scoring. Dietary problems are usually to blame and need to be identified and corrected asap. It is usually associated with excess concentrate intake in the parlour causing a transient acidosis (acidic rumen). This can alter the blood flow to the feet causing swelling of the soft tissues within the hoof. As the hoof wall is rigid there is nowhere for these tissues to swell into and they pinch and become sore. Another more serious consequence is that the soft tissues which support the pedal bone (the bone of the toe) can tear causing the bone to sink or rotate. This can then pinch the tissue on the sole of the foot and can manifest as solar ulcers which are very hard to cure effectively.