



The  
**GEORGE**  
Farm Vets

## SHEEP NEWSLETTER OCT 17

# Infectious causes of lameness

Lameness is a widespread health issue affecting most flocks in the UK to some extent. Levels of lameness over 2% are significant in terms of welfare and productivity and need intervention. The main causes are infectious bacteria that cause a variety of painful lesions of the foot. These conditions are: **Scald, Footrot and Contagious ovine digital dermatitis (CODD)**.



### Footrot and scald:

It has long been thought that footrot develops after secondary infection of a scald lesion however new research has shown that the same bacteria is responsible for both conditions. It is now known that footrot is the advanced form of scald. So prompt treatment of scald lesions will stop them developing into footrot. Both conditions are caused by the bacteria *Dichelobacter nodosus*. The bacteria mostly lives on infected animals' feet but can also survive in the soil for up to 30 days!

Scald causes a reddening of the space between the claws and moderate lameness. As the infection progresses the bacteria invades the hoof and causes separation from the foot which leads to the classic foul smelling lesions seen. Footrot leads to severe lameness and is a big welfare issue.

### CODD:

This condition causes severe lameness in the vast majority of infected sheep. It is important that it is differentiated from scald/footrot as the causative bacteria is different. Lesions start at the coronary band (the junction of hoof and skin on top of the foot). Loss of hair and bleeding ulcers are seen. From there the bacteria travels down into the hoof and leads to separation of the hoof wall. In severe cases the entire hoof can become detached from the foot! The bacteria that causes CODD are many species of *Treponemes*. This is the same group of bacteria that

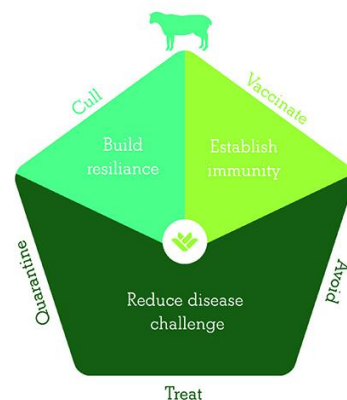
causes digital dermatitis in cattle. The bacteria are very robust and can survive in the environment and on foot trimming equipment for a long time.

### Risk factors for infectious lameness:

- Unknown pathogen causing the lameness: It is important to know what disease you are dealing with so an appropriate control plan can be created.
- Level of lameness: A high level of lame animals within the flock will increase the risk of spread to unaffected animals.
- The presence of "carrier" animals: Chronically lame sheep act as a constant source of infection to the rest of the flock.
- Delayed or ineffective treatment: Not treating or treating incorrectly reduces the chance of cure and the increased likelihood of further spread.
- Poor underfoot conditions: Moist and muddy conditions lead to damage of the skin on the feet allowing bacteria to establish infection.
- Housing lame sheep: Increasing stocking density when housing sheep increases the likelihood of spread.
- Buying in sheep without an adequate quarantine period: Bought in sheep may bring in footrot or CODD and spread it to the rest of the flock.

### Prevention:

Lameness prevention involves a whole farm approach and a good understanding of the disease causing the problem on farm. **The 5 point plan** has been developed as a guide to lameness prevention and control.



## 1. Treat:

**Injectable antibiotics are by far the most effective treatments for scald, footrot and CODD.** While topical antibiotic sprays will help in treatment they should not be used on their own. The bacteria often lies under the skin and horn where topical treatments cannot reach. In fact use of antibiotic sprays alone can lead to “carrier” animals.

**The most effective antibiotic is Draxxin.** It has a license for treatment of footrot and is long-acting so usually a single injection will clear most lesions. It is given to sheep in the muscle at a dose of 1ml/40kg. Engemycin and Tetroxyvet may work but the bacteria that cause footrot have been found to be resistant in some cases.

Pen Strep and Betamox will work but a 3+ day course is needed with injections every day.

Lameness is an extremely painful condition so we would always recommend treating affected animals with Metacam at a dose of 1ml/40kg given under the skin. A sheep in less pain will be more likely to eat and be able to keep with the flock.

If incidence of lameness is high within a flock then it may be useful to create a treatment group. Sheep can then be easily inspected, treated and isolating them from the rest of the flock prevents further spread.



**Footbathing** has long been the corner stone of lameness treatment and control, however it has now been shown **that it can increase the spread of lameness within a flock.** If footbathing facilities do not have areas for hardstanding before and after entering the footbath then footbathing will increase the spread of lameness. If hard standing is available then footbathing in <3% Formalin or zinc sulphate at high risk periods (housing, handling) can help in lameness control. We do not advise using antibiotics in footbaths as there is little evidence it works and also no products are licensed.

## Foot trimming:

Routine foot trimming of sheep is not recommended, it can lead to increased spread within a flock via trimming equipment and can itself cause painful lesions. Foot trimming of lame sheep is also no longer recommended for these reasons.

## 2. Cull:

Chronically lame animals have very poor cure rates due to permanently damaged horn. These animals may also be carriers that will be spreading lameness among the flock. If an individual animal has 2 or more cases of lameness it is recommended that it is culled.

## 3. Quarantine of bought in animals:

All bought-in animals should be quarantined away from the rest of the flock for 3 weeks. During this time they should be regularly checked for lameness lesions and treated if necessary. Even if animals arrive on farm sound, they could be carrier animals that may develop lameness within the 3 week isolation period.

## 4. Avoiding infection:

Avoiding disease in the first place is the best form of control. This involves avoiding all possible risk factors. Keeping pasture rotated and avoiding poached areas of land will reduce the damage to the skin of the feet and reduce infection. If sheep are housed, pens should be bedded regularly and cleaned out between groups of sheep. Areas where sheep are gathered should be clean and dry, and equipment should be disinfected between uses.

## 5. Vaccinate:

There is a vaccine available for footrot called **Footvax.** If footrot is the confirmed problem then it can be used before high risk periods (housing, weaning) to reduce cases of lameness. The whole flock should be vaccinated and any animals showing signs of lameness should be treated with Draxxin at the same time. Immunity usually lasts for 5 months but can vary depending on risk factors.

Lameness can be a huge problem to both sheep welfare and productivity. A robust control and treatment plan is required to get on top of the problem which must start with diagnosis of cause of lameness. If you have any questions or would like to book a lameness consultation please phone the practice on 01666 823035.

All the best,

Chris

