

sheep

Put your foot down on lameness

A realistic target for every sheep farm is to keep the number of lame sheep at any one time below 5% (one animal in 20)



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A PART from being an animal welfare issue, lame sheep do not thrive to their full potential and this loss in production, combined with the cost of treating lame sheep (labour, footbath solution and antibiotics), represents a huge cost to sheep farmers.

The causes of lameness in sheep are

many and varied. In Ireland, the main two causes of lameness are scald and footrot and these account for approximately 90% of lame sheep. The remaining 10% arise from other infections and injuries to the feet. Proper diagnosis is essential if the control/prevention programme is to be successful. The following are some of the more common causes:

1) Sores between the digits at the back of the foot, no smell from the sore and sheep have become severely lame very quickly. This is most likely to be scald.

2) Hoof horn lifting, foul smell, rotting in hoof, usually starting around the outside of the hoof. This is most likely to be footrot.



ABOVE: A bad case of foot rot.

3) Infection breaking out between the coronary band and the hoof (i.e. where the hoof meets the hair on the leg). Severe lameness and no smell. This is likely to be Contagious Ovine Digital Dermatitis (CODD). You should seek veterinary advice.

4) Injuries and infections in the joints

Table 1 | Various products that can be used, their dilution rates and advantages/disadvantages

Chemical	Concentration	Advantages	Disadvantages
Formalin	3% of 40% formaldehyde. (i.e. 300ml per 10 litres of water). Avoid higher concentrations due to risk of skin damage.	1) Sheep can walk through — fast working. 2) Cheap. 3) Breaks down naturally and is easily disposed.	1) Cannot be reused after one day. 2) Stops working if contaminated with mud, straw, faeces/organic matter. 3) Unpleasant — irritant, toxic and carcinogenic. 4) Very painful for lame sheep. 5) Hoofs become hard/ brittle with repeated use.
Zinc Sulphate	10% (1kg per 10 litres) using Zinc Hexahydrate. 6.5% (650g per 10 litres) using Zinc Monohydrate. Add a few squirts of washing up liquid to improve horn penetration.	1) Can be reused. 2) Not painful. 3) Not deactivated by organic matter.	1) More expensive. 2) Can be toxic if drunk. 3) Can be difficult to dissolve. 4) Need to stand sheep in bath. 5) Harder to dispose — heavy metal.
Copper sulphate	10% (1kg per 10 litres)	1) Can be reused. 2) Quicker to penetrate than zinc.	1) Very expensive. 2) No longer recommended by SAC due to risk of copper poisoning. 3) Reacts with galvanised metal. 4) Colours fleece. 5) Toxic if drunk. 6) Difficult to dispose.
Other organic acid zinc/copper salt mixtures	Use as directed.	1) Quick to penetrate. 2) Some stick to feet improving penetration further.	1) Very expensive. 2) Cannot be reused. 3) Reduced efficacy if soiled with organic matter.
Antibiotic footbaths	Use as directed by veterinary surgeon	1) Useful against CODD.	1) Expensive. 2) Cannot be reused. 3) Reduced efficacy if soiled with organic matter.

NOTE: Table adapted from Heather Stevenson, SAC Veterinary Services, SAC sheep & Beef Notes



are characterised by swelling, heat and tenderness in the affected area.

Identifying the cause of the problem is relatively easy. Putting in place an effective control programme, which cures infected sheep and prevents other sheep from getting infected, is a different matter altogether.

I find that I can nearly always guess how good the handling/footbathing facilities are on a farm just by looking at the sheep. Flocks with good handling/footbathing facilities 'in general' have far fewer problems.

The key to managing lameness is early intervention. Sheep with lame feet will do all in their power to avoid the sores from coming in contact with a footbathing solution. It makes sense that they would do so as the solution will sting causing pain to the already sore foot. But if the infected foot is not immersed in the solution, how can it be treated?

Ideally, sheep should be footbathed every time they are in for handling/drafting. In most instances, this means that the sheep will be footbathed once a month, or so. If, in the intervening time, there is an outbreak of scald in young lambs, an additional trip to the yard will be warranted. With this approach, lameness levels can be kept very low, provided

that there is an effective footbath on the farm.

An effective footbath must be designed and managed well. Walk through footbaths, where the sheep literally just run through the bath in a few seconds is, in my mind, not a great option. They work fine for lambs with scald, where a quick dip in something like formalin is quite effective. But they aren't much use when trying to control outbreaks of footrot or CODD, where the length of time that the solution is in contact with the feet has a bearing on the success of the operation.

Best solution

In my opinion, a 'stand in' bath is the best solution. This is a bath situated at the end of the dosing race, which holds about 10% more sheep than the race. This allows all the sheep in the race to be held in the footbath, while the race is being refilled with new sheep. As the next batch of sheep are being treated in the race, the previous batch are being footbathed. It takes no extra effort as the sheep are going through the race anyway.

A roof over the footbath is a good idea as it prevents rain water from diluting the solution.

It is also a good idea to have a short water bath before the sheep enter the

footbath (to clean their feet). Running the sheep across an area with loose round stones can also help to clean feet.

Even the best designed footbath will fail if it is not filled with a suitable footbath solution. Work out the size of your footbath — length by width and the depth of the solution in metres. This will give you the volume of water that the bath holds.

An example would be a footbath 2m wide, 3m long and 5cm of solution. To work out the volume of solution required, we multiply 2m by 3m, which gives us 6m². Next, we multiply 6m x 5cm, which is 0.05m to give us the volume of 0.3m³. One cubic metre is 1,000 litres; therefore, the volume of solution in the footbath given in this example is 300 litres.

Try to carry out the footbathing on a dry day and aim to have the sheep's feet as clean as possible. This can be achieved by running them through a water bath or across slats or round stones. There is no need to turn all sheep to pare their legs. However, sheep with overgrown feet or lame sheep should have their feet examined and pared, if necessary. Do not over-pare. Drawing blood is not a good idea. All you are trying to achieve is to correct the shape of the feet in the case of overgrown feet.

Once sheep have been footbathed, the solution must be given a chance to work. Standing the sheep on a dry, clean and hard surface after treatment is essential. Ideally, sheep should be allowed to stand on this surface for one hour before being turned out to grass.

It is a good idea to draft off any sheep that are lame. Keep these animals in a separate paddock to avoid contaminating the healthy sheep post footbathing. Lame sheep should be bathed every five days until they are cured before being returned to the main flock. Serial re-offenders (i.e. sheep that keep getting lame) should be culled.

There is a vaccine available to help control footrot in sheep (Footvax). It is expensive and is only an aid and not a replacement for having proper facilities as it only controls footrot.

Flocks that have problems getting footrot under control often use vaccination to help them get on top of an outbreak before embarking on an intensive footbathing regime to keep the disease at bay.



Foot paring.



Stand-in footbath.