

The Five Point Plan for Tackling Sheep Lameness

Footrot and scald are infectious bacterial diseases and are the most common cause of lameness in sheep flocks in the UK, with an estimated 3 million sheep being lame at any one time. Lameness is a major animal welfare and economic challenge across the sheep sector, costing an estimated £24 million to the industry, and it is also a considerable barrier to sustainable production. To help the industry to meet the challenge of reducing lameness FAI developed the Five Point Plan.

The Five Point Plan was developed by drawing together existing science on sheep lameness and practical experience from farmers who had achieved and sustained low levels of lameness. The 5 Point Plan has five action points that support the animal in three different ways: building resilience, reducing disease challenge and establishing immunity (Figure 1, Table 1).

Table 1: Description of the relevance and methods of implementation for each point of the Five Point Plan

5 Point Plan	Relevance	Implementation
1. CULL badly or repeatedly affected animals	By removing worst offenders, flock resilience to disease is increased. Ewes with chronic misshapen feet likely to be a source of infection.	Ewes treated more than once for footrot or scald should be cull tagged. "Two strikes and you're out" policy. Cull ewes with misshapen chronic feet.
2. QUARANTINE incoming animals	Minimising overall disease challenge for incoming and existing animals, allowing time for inclusion to vaccination and management programme.	Develop robust quarantine procedure to protect both existing ewes and the newcomers.
3. TREAT clinical cases promptly	To alleviate disease in the individual animal, and to reduce disease transmission to others.	Identify and rapidly treat lame animals in the whole flock. Use a simple scoring system to regularly select animals and target treatment.
4. AVOID propagation of infection on farm	Reduce the opportunities for the disease to spread sheep to sheep via the ground, periods of close contact are high risk.	Identify opportunities for improvement in underfoot conditions, both in the field/barn and in the handling set up and frequency.
5. VACCINATE biannually	Build immunity in breeding stock, vaccination gives additional protection at high risk times.	Initially vaccinate all breeding stock biannually, timing doses to coincide with high-risk times such as housing and late summer.

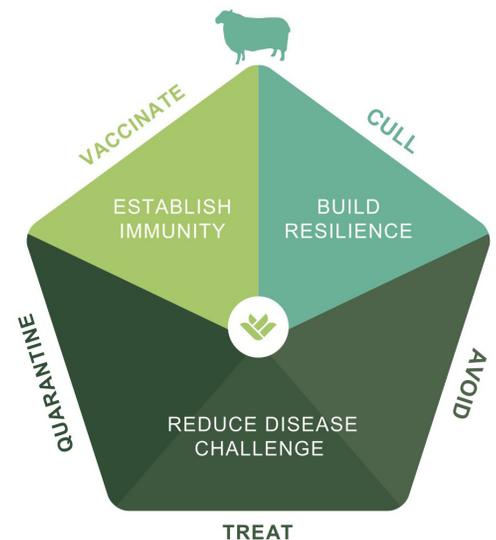


Figure 1: Summary of the Five Point Plan



FAI implemented the plan on their own farm, and worked with two other forward thinking farmers, Huw Davies at Llandre Farm in Wales and Graham Dixon at Alwinton Farm in Northumberland to implement it in their flocks too. All three farms reported significant challenges with lameness, primarily due to footrot and scald, and were motivated to work at reducing levels. At FAI, they used a mobile handling system, reduced frequency of handling, vaccinated biannually and culled 4.2 per cent of ewes for lameness in year 1. Llandre Farm focused on prompt treatment and upgrading handling areas, and Alwinton Farm upgraded permanent handling facilities and implemented a strict cull and biannual vaccination programme.

Each farmer measured the lameness prevalence in their flock monthly, using a simple 6-point locomotion score (Table 2), where ewes scoring 1 or greater are considered lame.

Table 2: Summary of sheep locomotion scoring system

Locomotion Score	Description
0	Sound
1	Very mild lameness, only just noticeable
2	Obvious lameness, stands and walks on all 4 legs
3	Obvious lameness, stands on three legs, walks on all 4 legs
4	Obvious lameness, stands and walks on 3 legs
5	Obvious lameness as score 4, but multiple legs involved



All three farms achieved the target of less than 5% lameness within the first year (Figure 2). During the four-year period, the farms that maintained the commitment to all five points of the Five Point Plan and achieved lameness levels less than 1 per cent in years 2-4. One farm culled less strictly and vaccinated annually instead of biannually, the result of which is reflected in the relatively higher lameness prevalence and within year variation (Figure 2).

This demonstrates that with difficult and intractable problems like sheep lameness, the majority of producers are likely to require implementation of all elements of the Five Point Plan to achieve sustained lameness reduction. However, the success of these farms implementing the Five Point Plan show that lameness reduction is achievable within a relatively short time scale, but does require long-term commitment in order to sustain success.

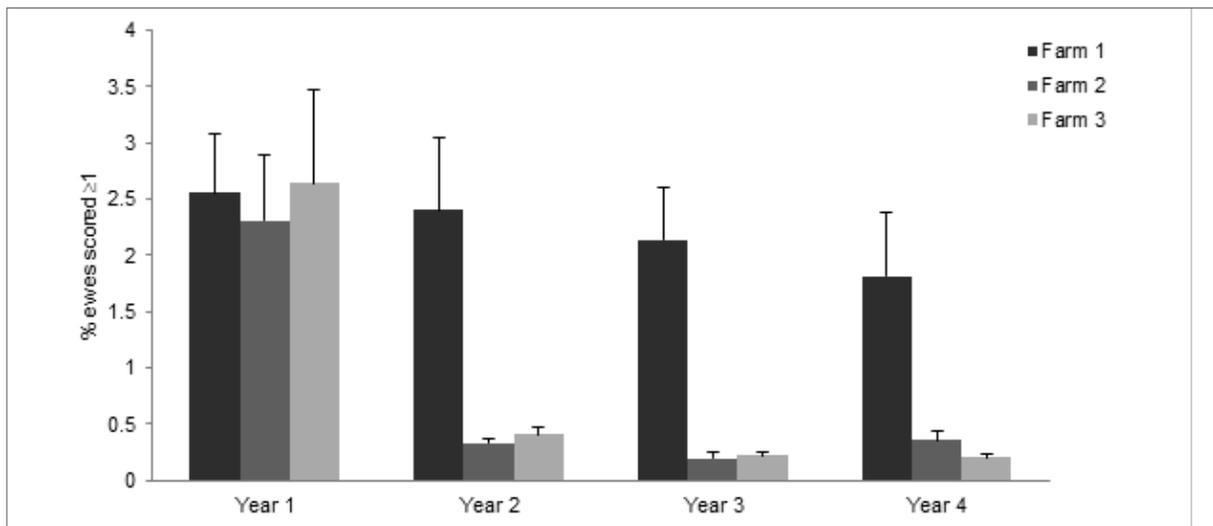


Figure 2: Lameness prevalence (mean \pm SE) by farm and year

As well as improving the animal's welfare and having an economic benefit to the farmer, wide implementation of the Five Point Plan has the potential to substantially reduce the number of doses of antibiotics used against this disease in sheep. This is particularly relevant as antibiotic resistance is an extremely important issue for all livestock species, and opportunities to reduce it should be taken. Whilst the Five Point Plan was primarily designed to tackle lameness due to footrot and scald, the principles are likely to be relevant where there is infection with contagious ovine digital dermatitis (CODD) within a flock, since this is also thought to be an infectious bacterial disease.

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