



Animal Health & Welfare NI

Sheep Health

June Sheep Health

AHWNF Flock Health Focus: Reducing Lameness: The 5-Point Action Plan

The spring and summer so far have proven challenging, the wet conditions will result in a lot of lameness in flocks across the country. Lambs can be particularly susceptible at this stage as their feet may be tender. The interdigital space between the two claws of a lamb's hoof is more sensitive and therefore more prone to irritation from wet, muddy conditions or long grass.

Managing Lameness in Lambs

Foot Bathing

As the main lameness issue in lambs at this time of year is scald, foot bathing can be a very effective treatment and prevention. Some benefits of foot bathing include:

- Disinfectant action- gathering sheep at any point can increase risk of bacterial spread, so foot bathing during any handling events can reduce spread
- Maintenance of hoof condition- many products will add minerals to the hoof horn, which will harden it and leave it less susceptible to damage.

When foot bathing, always ensure you read the product data sheet and are following the correct protocol, otherwise it may make the problem worse. Some tips for foot bath best practice are as follows:

- Double check dilution rate to be sure that the correct product concentration is being used- this can make a huge difference in product efficiency if not correct.
- Are instructions for contact time being used correctly? A 10% zinc sulphate product may require sheep to stand in it for at least 30 minutes. Other products may require less standing time.
- Sheep should walk through a clean water bath first to remove dung and dirt, which can reduce product efficiency.
- Ensure the footbath is clean before adding the product.
- Sheep must stand on clean, dry concrete or hard standing after treatment until the product has dried- this will take at least 20 minutes. If the product has not dried then it will be wasted once put back out to pasture.
- Follow product instructions regarding how many sheep can be run through before the solution needs to be changed.

Do not foot bath sheep with Contagious Ovine Digital Dermatitis (CODD) lesions or severe footrot infections. Foot bathing will not treat these and will be extremely painful for the sheep. Ensure you have correctly diagnosed the cause of lameness before foot bathing.

Improving In-Field Hygiene

Creep feeding lambs can be a useful way to reduce stress at weaning, take pressure off ewes and to finish lambs quicker, however the area around creep feeders can become a breeding ground for bacteria.

If a creep feeder is being used it's important to keep the area as hygienic as possible, otherwise lameness will quickly spread throughout the flock. Moving the creep feeder regularly, particularly in mucky conditions can reduce lameness incidence, bacteria thrive in moist and dirty conditions.

Hydrated lime can be a very useful product in controlling lameness in flocks. Regularly applying this to the area surrounding a creep feeder, lick bucket, feeding troughs or water troughs can help to dry the area and reduce bacterial build up. Bacteria typically need acidic, low pH conditions to grow; therefore with lime being highly alkaline this will increase the pH and inhibit bacterial growth. Lime also acts to dry the feet and will harden the hooves. Apply the lime generously, as it needs to coat the sheep's foot and get in between the interdigital space in order to be fully effective.

Lime is a skin irritant, therefore ensure you wear Personal Protective Equipment such as gloves, goggles and a mask when applying it, as it is highly potent.

Introducing the Five Point Plan

The five point plan has been designed to reduce lameness prevalence across the entire flock. If more than 2% of your flock is experiencing lameness at any time, consider implementing this plan. Lameness can have a very negative effect on growth and fertility, resulting in lower scanning percentages and lambs taking longer to finish as well as being detrimental to animal welfare. It is important to keep on top of lameness issues in the post-weaning period, to improve scanning percentage and improve the foot health of next season's lambs along with ewes.

Point 1: Cull

Culling chronically lame ewes is essential to build resilience in the flock. Being tough is necessary in these cases, so operate with a two-strike policy in one season. It can be difficult to cull a ewe that otherwise seems productive, however if you wouldn't keep an empty ewe at scanning, a similar principle should be applied to lame sheep. Ewes that are repeatedly lame will spread disease throughout the flock. Some ewes will have poor feet conformation that may lead them to be more susceptible to foot lameness, so identifying ewes with misshapen feet for culling can also be a useful preventive measure. In some cases, these poor conformations may be heritable and so breeding from these animals may perpetuate poor conformation in future animal crops.

It can be easier to identify repeatedly lame animals if an EID system is in place. Alternatively, management tags can be used at the first lameness treatment, making a ewe easily identifiable if they need to be treated again. Stock marker can be used on the affected leg, and a list of tags can be kept on your phone.

Do not keep replacements from chronically lame ewes. Sheep lameness is estimated to be moderately heritable. Similarly, it can be useful to investigate whether there are patterns of lameness, e.g. do lambs out of a certain ram have more issues than another. In this case, these rams should be culled and no lambs kept from them for breeding.

Point 2: Quarantine

Introducing new animals to the flock can be a major risk factor for bringing new strains of disease onto the farm. Even if these animals may appear healthy, they can be carrying underlying disease issues. It is essential to maintain and regularly review excellent quarantine and biosecurity protocols.

- Only buy sheep from a trusted source
- Ensure the vehicle used to transport the sheep is clean and disinfected before and after use
- Quarantine bought-in animals for at least 28 days
- During quarantine, check the animal's feet for lesions, evidence of footrot or signs of CODD and treat accordingly
- Foot bath the sheep on arrival and at least twice to disinfect their hooves
- Do not introduce any lame sheep to the flock until they are fully healed
- If you have a vaccination programme for footrot, vaccinate incoming stock
- Apply the quarantine protocol to sheep returning from shows or sales.

Point 3: Treat

Disease can spread very quickly, so it's important to treat lame sheep as soon as possible, even if only mildly lame.

Target treatment within 3 days of becoming lame. It is important to remove any dirt so that a full inspection can be made. Ensure that the correct cause is identified as treatments differ between different causes of lameness. If you are unsure at any point about the cause of lameness, consult your private vet.



LAMENESS QUICK REFERENCE GUIDE

A quick guide to different causes of lameness in sheep

FOOTROT

WHERE?	Underrun hoof horn; grey; oozing pus
SMELL?	Strong foul smell
RATE OF SPREAD?	Rapid spread
RISK FACTORS	Bought-in sheep, wet conditions
FIRST ACTIONS	Isolate affected sheep, inject with LA oxytetracycline and apply antibiotic spray
NOTES	Do not trim feet

SCALD

WHERE?	Inflamed pink/red skin between the claws; loss of hair
SMELL?	No smell
RATE OF SPREAD?	Moderate
RISK FACTORS	Wet conditions, abrasions caused by rough pastures, high stocking densities
FIRST ACTIONS	Footbath or antibiotic spray
NOTES	Most likely cause of lameness in young lambs

CODD

WHERE?	Lesion/ulcerated area at the coronary band (top of hoof). Whole horn capsule may fall off
SMELL?	No smell unless footrot is also present
RATE OF SPREAD?	Highly contagious
RISK FACTORS	Bought-in sheep
FIRST ACTIONS	Isolate affected sheep, inject with LA amoxicillin or LA oxytetracycline and provide pain relief
NOTES	Do not trim feet

TOE GRANULOMA

WHERE?	Fleshy tissue under the sole horn grows out as a red pea sized ball on the toe
SMELL?	No smell
RATE OF SPREAD?	Not contagious
RISK FACTORS	More likely to occur where CODD and footrot are present, response to excessive foot trimming or footbathing
FIRST ACTIONS	Seek veterinary advice and provide pain relief
NOTES	Do not trim off the granuloma

TOE ABSCESS

WHERE?	Pus oozing from the coronary band and between the horn and skin. Hooves hot to the touch
SMELL?	Strong smell
RATE OF SPREAD?	Not contagious
RISK FACTORS	Puncture of the hoof or separation of the white line
FIRST ACTIONS	Drain the abscess and treat with antibiotics and provide pain relief
NOTES	Hooves often feel hot

SHELLY HOOF

WHERE?	Wall and toe horn separate to form a pocket. Sheep may not appear lame unless walking on hard ground
SMELL?	No smell
RATE OF SPREAD?	Not contagious
RISK FACTORS	Damage from rough ground, genetic predisposition
FIRST ACTIONS	If lame, remove the horn flap and provide antibiotics and pain relief if there is infection
NOTES	Can lead to secondary infection

HIGHLY CONTAGIOUS – Act quickly and isolate affected sheep

INFECTIOUS – Increased risk in wet conditions and young stock

NOT CONTAGIOUS – Management and environmental causes

**EARLY DETECTION & PROMPT ACTION
IMPROVE WELFARE AND PRODUCTIVITY**

Antibiotic spray is very useful at killing surface bacteria and, as well as treating the sheep, will reduce spread of the bacteria. Spray all feet rather than the affected one only, as the healthy feet will also have a high number of bacteria and this may prevent other feet becoming infected.

Avoid routinely foot trimming sheep: research has shown that it is not necessary and, in some cases, can cause lameness. It can also allow disease to spread to other sheep if foot trimming equipment is not adequately disinfected between sheep. Immersing clean foot trimming equipment in a licensed disinfectant according to the manufacturers' recommendations, taking care to follow health and safety guidance for yourself, has been found to be effective if foot trimming is deemed necessary.

Point 4: Avoid

Most sheep farms will have a few sheep that experience lameness at some point, no matter how well the other points of the five-point plan are followed. Sometimes, despite resilience, under-foot conditions can cause severe lameness. By using some of the following points to avoid infection, the incidence and rate of spread of disease can be reduced.

- Wet and warm weather conditions favour bacterial spread. When conditions become extremely wet, try to improve under-foot conditions in poached/heavy traffic areas by spreading gravel, woodchips or lime.
- If possible, use mobile handling systems, to avoid creating one contaminated area.
- Use hard ground without sharp stones to avoid damage to feet
- Try to foot bath after each handling event, and move sheep to an area that has been sheep-free for at least two weeks
- Do not breed from animals that have had severe footrot or CODD, or have very misshapen feet
- Isolate any lame sheep until they have recovered
- Rotate stock regularly to avoid build-up of bacteria (footrot can live on pasture for approximately 14 days)
- Move feed troughs and creep feeders regularly.

Point 5: Vaccinate

There is a licensed vaccine that has been found to be very effective in treating and preventing footrot. Where CODD is a major problem on farm, it's also important to consider that there can be co-infection of footrot and CODD, so vaccination may still be useful in these cases. To determine whether vaccination is correct for your farm, have a discussion with your vet.

For the vaccine to be the most effective, consider the following points and always consult the manufacturer's datasheet:

- The whole flock should be vaccinated (do not miss out rams)
- Time the vaccination with high-risk periods on farm (e.g. at housing) Do not vaccinate in the 6 weeks prior to tupping, or for 4 weeks before or after lambing.
- The vaccine should not be administered within 6-8 weeks of shearing, as it can cause sterile lumps that may result in bleeding at shearing time.
- If there is a high incidence of footrot, two injections may be given 6 weeks apart.
- The vaccine will be protective for 4-6 months, it can be given annually or biannually, depending on your disease challenge.
- Ensure the vaccine is stored out of direct sunlight and in a refrigerator at 4-8 degrees Celsius.

Vaccinating will not completely eliminate lameness issues from your farm, but it can reduce incidence significantly, particularly in flocks that have a very high incidence of footrot. In order to gain the best results vaccinating must be accompanied with the use of the other points of the 5-point plan.