



### Lambing season is coming to the end

for most of our sheep clients – hopefully those of you who have finished are enjoying a well-earned rest! This time of year always brings a strange mixture of feelings – hopefully great fulfilment and satisfaction, as you see the results all your careful preparation come to fruition. There is also the inevitable exhaustion from endless days rolling into nights, sometimes feelings of helplessness and inadequacy when things aren't going to plan. Remember are not alone; every lambing shed and muddy sheep field in the country contains a shepherd who is too tired to think straight. No question is ever stupid - please don't hesitate to pick up the phone if you are feeling stuck.

In this Spring issue of Flock News, we will be covering some of the biggest seasonal issues to help you safeguard your expanding flock. Most flocks will experience a handful of cases of mastitis in ewes during early lactation, which if not dealt with correctly, can lead to significant economic losses. We'll cover the best prevention and treatment options to help minimise the impact this can have on your flock. We will also explain how to keep your young lambs safe from their biggest parasitic threat – *Nematodirus*. Emily Rainbow is taking us through a five-point plan for reducing tackling lameness issues, which we suspect will be useful after all this rain.

When you watch your new arrivals bouncing round the field, remember to give yourself a pat on the back.

Thank you for your ongoing support!

Team Farm



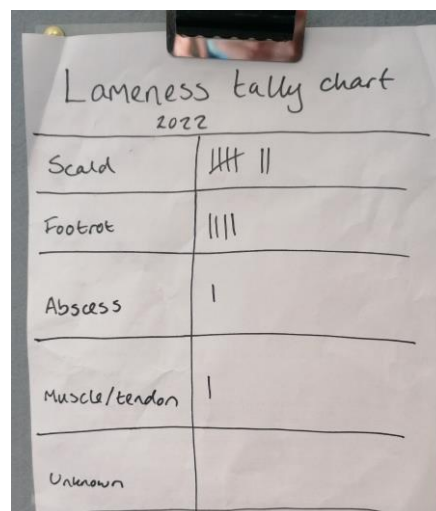
### Tackling Lameness at Flock Level –

*Emily Rainbow MRCVS*

Having less than 2% of flock affected by lameness at any time is a reasonable and achievable target. More than this indicates a problem developing...

Don't rely on subjective assessments or guesswork. Count and record the proportion of lame sheep in your flock now they have finished lambing, BEFORE implementing any new protocols. This count will act as a baseline, to help assess whether changes in management result in improvement.

Catch up lame sheep to examine and treat as soon as you spot them. It's important to check the feet of every lame sheep to identify the cause. This enables you to select the most effective treatment and prevention measures.



Scald	
Footrot	
Abscess	
Muscle/tendon	
Unknown	

There are six main causes of lameness in UK:

1. Scald
  - Red/pink inflammation of skin between toes, white pasty scum over top, sometimes smelly
  - Caused by *Dichelobacter nodosus* bacteria – these can survive up to 14 days on soil
  - Can be very lame with minor lesions

## 2. Footrot

- Grey, oozy puss with strong smell. Hoof wall separation starting from between toes. Sole and horn becomes under-run.
- Caused by bacteria – *Dichelobacter nodosus* and *Fusobacterium necrophorum* (the latter are extremely resilient and survive long periods on soil)



## 3. CODD

- Usually starts at top of hoof, and then progresses to under-run the hoof down to the toe. Whole horn may fall off.
- Only 30% with disease show signs of lameness, so whenever sheep are gathered, take the opportunity to check feet. Isolate any affected immediately.
- Often mixed infections of CODD and footrot – *D. nodosus*, *F. necrophorum* and *Trepoma* family
- Can take up to four months to show clinical signs after infection picked up.

## 4. Toe Granuloma

- Fleshy growth of tissue growing out from under toe. Wall horn often overgrown.
- More likely on farms with CODD/footrot



## 5. Toe abscess

- Pus coming from above foot or between toes - can smell strongly.
- Hooves hot to touch and painful, often very lame sheep.

## 6. Shelly Hoof

- Wall and toe horn separates to form a pocket.
- Cause unknown, thus prevention unknown. Theories include: rough/wet ground, stony standings, nutritional imbalance or use of formalin foot baths.
- More commonly seen in flocks with high levels of scald/footrot.

## The Five-Point Plan to Treat Lameness In Sheep

### 1. Cull – to build resilience

Severely affected or repeat offenders should be culled. They act as a source of infection to the flock. This will result in selective breeding for increased resilience to lameness pathogens, reducing the disease challenge on the farm.

### 2. Quarantine – to reduce disease challenge

Any brought in sheep are a risk. Check feet thoroughly on arrival, during quarantine and before mixing with the flock. Quarantine for minimum of 28 days. Footbath in either 10% zinc sulphate or 3% formalin every 5 days for 3 occasions whilst in quarantine.



3. Treat – to reduce disease challenge

Disease spreads quickly, so treat even mildly lame sheep ASAP.

Catch within 3 days of becoming lame, inspect foot thoroughly, diagnose the cause correctly (we're happy to look at photos you send us), then treat accordingly.

Mark treated sheep and cull repeat offenders.

Foot bathing is not an effective treatment for footrot or CODD. Zinc sulphate footbaths are good for scald, especially in lambs. Lame sheep should never be put through a formalin footbath.

4. Avoid – to reduce disease challenge

Improve underfoot conditions – disease spreads well in muddy, poached areas. Keep handling systems clean. Consider foot-bathing as sheep leave handling area to help reduce disease load, then moving to a pasture that has been sheep-free for 2wks. Do not breed from or keep replacements from sheep that have had scald or footrot (susceptibility is inherited). Keep treated lame sheep separate.

5. Vaccinate – establish immunity

Timing is key – vaccinate ahead of high-risk times on farm e.g. housing. Footvax gives 4-6 months protection – it can give annually or bi-annually. Offers partial protection against footrot, reducing likelihood of lameness developing in every individual by 20%. This is why whole flock vaccination (including rams) gets the best results. It helps many flocks achieve close to zero lameness.

NB: Vaccinated sheep should never then be injected with 1% Moxidectin (fatal).



## Nematodirus Not Welcome

It has been a baffling year for parasites. We saw widespread Haemonchus issues last Autumn, much later than normal, following the summer drought. Rested “clean” pastures seem to have retained high worm burdens, even after the heat of summer and cold snap this winter. We are no longer surprised to find resistance to multiple anthelmintics, even on farms where anthelmintics are not considered to be over-used. It’s becoming more important than ever that we stay one step ahead of the field. We must keep track of the burden of every group of animals and every acre of land they graze, and we must check the efficacy of every treatment we give.

Nematodirus is a parasite we have always considered to be fairly predictable, so much so that SCOPS and NADIS both publish Nematodirus forecasts based on weather station data (see below).

<https://www.scops.org.uk/forecasts/nematodirus-forecast/>



- Low Risk
- Moderate Risk
- High Risk
- Very High Risk

This map (downloaded on 26/04/2023), shows our area as High/Very High Risk for the next 7 days

Weather conditions play a massive role in the life cycle and hatching of Nematodirus larvae, enabling these predictions to be made. Before they can hatch, the eggs have to undergo a period of cold weather followed by warmer temperatures of 10°C or more. This is called “cold conditioning.” When these conditions occur in a short space of time, a mass hatch can be triggered, resulting in a huge population of larvae on the grass, ready to be ingested by vulnerable lambs.

In the south of England, this traditionally occurs in April/May, whereas in northern England and Scotland, it is not normally seen until early June. However, with weather patterns becoming more and more erratic, it is increasingly important to keep an eye on these forecasts. We can no longer work to particular calendar dates, or what happened in previous years. We now frequently experience warm enough weather as early as February or as late as May.

### Why worry about Nematodirus?

Nematodirus is a nasty parasite that lambs between 6 and 12 weeks old are particularly vulnerable to. Unfortunately, the timing of a mass hatch often coincides with lambs reaching this age bracket. It causes sudden onset profuse, watery diarrhoea, which can lead to severe dehydration and death. Clinical signs usually appear two weeks after the ingestion of larvae.

With most Strongyle infestations, we only consider worm egg counts over 250-300 eggs per gram to be high enough to cause a problem. However, Nematodirus is different. It is so nasty that we recommend treating even if only one egg is seen on a worm egg count, as it can be the first indication of a big problem about to develop.

Nematodirus eggs are extremely distinctive, being approx. 1.5x the size of a Strongyle egg, with a double-layered wall and pointed poles. The photo below shows how Nematodirus eggs (A) compare to Strongyle eggs (B) and coccidia oocysts (C).



Eggs shed by young lambs remain dormant on the pasture from one spring to the next, ready to be picked up by the next batch of lambs the following year. Although occasionally we see Nematodirus eggs in ewe faecal samples, ewes are not clinically affected by Nematodirus and do not play a part in their life cycle.

This trait puts us in a very strong position to help protect our lambs. By simply avoiding turning lambs out on pastures grazed by lambs of a similar age last year, we can effectively mitigate the risk. Good record keeping and pasture rotations is paramount here. However, we can never be too careful. Following high-risk weather, we advise checking your lambs' faecal worm egg counts every couple of weeks, starting when the oldest lambs reach 4 weeks old, and continuing until the youngest reach 12 weeks old. After that, worm egg counts every 4-6 weeks should suffice.

### Which lambs are at highest risk?

- Lambs reaching 6-12 weeks at same time as weather warming up
- Lambs grazed on same pastures year after year
- Lambs in groups of mixed ages – concurrent coccidiosis infection
- Triplets and foster lambs



### How do we treat?

Many farmers will treat lambs for Nematodirus as a precaution, using a Group 1 (white) drench, without having done any testing. So far, Nematodirus has only rarely been found to show resistance to Group 1 drenches, making it a good choice if Nematodirus is found to be present.

However, Nematodirus will not be the only worm present within these lambs. We have to remember that every time we treat, we unnecessarily expose the rest of the natural worm burden to an anthelmintic, which inevitably leads to the eventual development of resistance in all species of worm.

With careful pasture rotation, keeping an eye on Nematodirus forecasts and regular worm egg counts, there is no need to treat for Nematodirus "just in case," only when the risk is real.

## Mastitis in Ewes

Around 5% of ewes in the UK will suffer from clinical mastitis during their lactation. Up to half of these ewes will die as a result, and 90% of those remaining will lose the affected quarter. Mastitis is therefore a significant reason for ewes being culled out before the end of their productive life, as well as being unable to feed their lambs.

Clinical mastitis is however the “tip of the iceberg” – a further 20-30% of the flock will also be affected by sub-clinical mastitis. This means that the ewe is fighting an infection within her udder, but the normal signs of a painful, swollen udder and clotted milk are not evident. However, the ewe will often lose body condition and become susceptible to other infections, as well as dropping milk. Significant reductions in lamb growth rates are seen. It is estimated that clinical and sub-clinical mastitis could be responsible for up to 12% of ewe culls nationally.

Older and thin ewes are more likely to develop mastitis, as well as those with malformed udders and teat lesions. This reinforces the importance of examining the udder carefully as part of your pre-tupping “teeth, tits and toes” check at weaning. Because sheep are handled much less frequently than dairy cattle, farmers are often not aware that of an issue until they detect lumps in the udder at weaning or pre-tupping.



Where do the bacteria come from?

- *Staphylococcus aureus* – found normally on the skin, pushed into the teats when lambs suckle
- *E coli* – unhygienic environments e.g. dirty lambing pens, wet muddy fields
- *Pasteurella* – either from ewes themselves (stress leading to a drop in immunity) or spread from lambs to ewes while suckling. Most common cause of early lactation mastitis.

Treatment options:

- Injectable antibiotics e.g. Synulox, Pen and Strep, Tylan (off licence), Micotil (vet only)
- Intra-mammary antibiotics e.g. Orbenin – only in severe cases as need to remove lambs
- NSAIDs e.g. Metacam

Prevention revolves around good hygiene, especially at lambing time, minimising stress and avoiding big fluctuations in body condition. Carefully feeling for any lumps in the udder prior to tupping is vital to avoid clinical infection in subsequent lactations.

### IN THE NEWS:

#### Farming Equipment and Technology grant applications open

The window for the first round of Animal Health and Welfare grants is now open. Farmers are invited to apply for grants worth between £1000 and £25,000, to put towards equipment designed to improve animal welfare and overall productivity. Examples include handling systems, foot baths, EID readers, weigh scales and much more. The deadline for applications is 15th June at midday. A full list of eligible items can be found here: [Annex 4: FETF 2023 Animal Health and Welfare eligible items - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/animal-health-and-welfare-grants-2023).

This Farming Equipment and Technology Fund represents the next step on the Animal Health and Welfare Pathway – part of the Sustainable Farming Incentives (SFIs) designed to replace EU subsidies.

The first step in this pathway was the roll out of the Animal Health and Welfare Review. This is a government-funded vet visit, performed by your own vet, to discuss overall flock health and focus on any specific areas that concern you. It includes some faecal worm egg counts and anthelmintic drench testing. More information about what is involved and how to apply can be found in previous Healthy Flock newsletters.

Your grant application is far more likely to be successful following an Animal Health and Welfare Review visit by your vet, who can then support your grant application on the back of it.

To apply for a grant: <https://ahw.fetf.org.uk/>