

May Sheep Health

AHWNl Flock Health Focus: Parasite Control in Young Lambs

It's a great relief to see lambs thriving out at pasture, having come through that early high-risk period when they're most vulnerable to disease. However, it's important to continue to monitor potential parasite burdens, as this next phase at grass brings a new set of health challenges that can have major impacts on performance if not addressed until too late.

Nematodirus

Nematodirus battus is a gut roundworm that causes disease almost exclusively in lambs, as a strong immunity is built against it over the first grazing season. If left untreated, it can result in lamb mortalities.

What are the greatest risk factors?

- Grazing contaminated pasture that lambs grazed the previous year
- Lambs that are 6-12 weeks old (these have not experienced a challenge yet, do not have immunity and are beginning to consume more grass)
- Peak egg hatch has occurred- visit the Sustainable Control Of Parasites in Sheep (SCOPS) website, which provides forecasts locally on the current stage of *Nematodirus* hatching.
- A history of coccidiosis in the flock
- April-June, although the risk varies from year to year.

It's most common in late spring and early summer, and while still present later in the summer, after initial challenge lambs will become immune. However, peak egg hatch depends on the weather conditions and will not be the same year-on-year. AFBI has reported that a peak egg hatch occurred for many parts of Northern Ireland in the first week of April this year.

Eggs that other lambs have excreted in the year previous will have survived the winter. A cold spell followed by warmer conditions is what triggers them to hatch. Therefore, if this year's lambs are grazing pasture that last year's grazed, they are at a higher risk of infection. It is also important to note that lambs from younger age groups should be monitored closely. Twin lambs or single lambs born to mothers with poor milk yield, triplet lambs or fostered lambs may start consuming grass earlier and therefore be at risk of earlier infection.

What signs should I look out for?

Once ingested *Nematodirus* larvae invade the intestinal wall, causing severe damage. Clinical signs seen as a result of this include:

- Profuse diarrhoea
- Dehydration
- Sudden weight loss

- Affected lambs can be seen congregating around water troughs due to severe thirst caused by dehydration.

Control and treatment

- Avoid grazing this year's lambs on pasture grazed by last year's lambs at a similar age if possible.
- Use the Sustainable Control Of Parasites in Sheep (SCOPS) forecasts- predictions of when egg hatchings are imminent or in progress for your area are available [here](#).
- If treatment is required, treat lambs with a white drench (benzimidazole).
- A few repeat treatments may be required depending on risk, especially as there is no residual protection after treatment, however at roughly 12 weeks post-exposure lambs should have developed good immunity.
- Due to possible anthelmintic resistance, it is important to check that the treatment has worked, by carrying out a Faecal Egg Count 7-10 days after treatment.

Don't Rely on Faecal Egg Counts (FEC) for Nematodirus

Unfortunately, FECs are not a reliable indicator of Nematodirus risk before clinical signs appear, as the majority of damage is caused by immature larvae which are not yet producing eggs. By the time eggs are detected in a FEC, it can be too late to effectively treat as disease will have already developed.

Coccidiosis

Coccidiosis is a disease caused by a protozoan parasite (called *Eimeria*). Disease is most common in young lambs aged 2-8 weeks old, peaking at 4-6 weeks. Although disease can occur in lambs up to three months old, after this period, lambs should have developed immunity therefore there should be no need to treat. This disease can significantly reduce production in lambs and can sometimes cause death. It is present on many farms, but not all will have clinical disease as a result.

Why it matters

Lambs may be infected when they ingest the infectious form of the coccidia, known as oocysts. The oocysts may persist in the environment and may be passed to the lamb from the ewe via their faeces, as the ewes, if infected, can shed large amounts of oocysts around lambing. Therefore there can be a major build up of oocysts in housing around lambing time. A lamb may also ingest oocysts on pasture that have been passed in the faeces of other infected lambs. Once swallowed, the parasite rapidly multiplies in the gut; therefore, lambs can shed millions more oocysts in their faeces than what they consumed.

What to look out for

- Dullness
- Loss of appetite
- Diarrhoea (with or without blood/mucus)
- Straining
- Vocalisation
- Dehydration
- Weight loss

Risk factors

This year may be a particular high risk for coccidia, as they thrive in moist environments and can spread in mucky conditions. Not all lambs may show clinical signs, but if they have a particularly high number of parasites ingested or are put under stress they are more likely to develop clinical illness. Some risk factors include:

- Dirty or contaminated environments (during housing as well as grazing)
- High stocking density
- Stress (weather, poor nutrition, handling)
- Grazing after older lambs

Control and prevention

- Maintain clean, dry bedding
- Maintain good hygiene at housing, keep water clean
- Move creep feeders regularly to clean ground
- Avoid grazing later lambs in the same pasture as early lambs
- Reduce stocking pressure
- When cleaning housing, use a steam pressure washer if possible; this will be more effective than disinfectant.

When to treat

Treatment decisions should be made based on:

- Lamb age
- Clinical signs
- Environmental conditions

If a high challenge is expected, treat 10-14 days after exposure- the delay in treatment should allow some active immunity to develop.

Using Faecal Egg Counts (FEC)

There are several non-pathogenic species of coccidia, with only two harmful species that cause clinical disease, so it's important to differentiate between these. Therefore, care should be taken if using FECs. There may be a high oocyst count but with absence of clinical signs, these coccidia may not be harmful and there is no need to treat and remove these. Similarly to *Nematodirus*, the parasite may also be present and already causing damage before oocysts are shed in the faeces. FECs can still be useful in diagnosis if lambs appear to be showing early symptoms. This will help to ensure that you are treating for the correct disease.

Don't Forget Liver Fluke in Ewes

Depending on when your last treatment for liver fluke was, a final treatment now in the late spring may be required to ensure adult fluke are removed and fewer eggs are passed onto pasture. Due to the later season for liver fluke this year, there could be a risk that sheep have picked up liver fluke again since a treatment in late January/February.

Looking Ahead

Nematodirus and coccidiosis tend to be the most important parasitic diseases occurring in lambs in the spring and early summer. However, it's important to monitor and control other gut worms coming into the summer. While not the best management method for *Nematodirus* or coccidiosis treatment, FEC is still be a very useful tool for detecting other gut

worms. Lambs can be tested from 6 weeks old, and this can be useful for detecting if other gut worms are present and causing challenges on your farm. Every farm is different, and therefore exact timing of parasite challenge can differ.

 Animal Health & Welfare NI Sheep Health Nematodirus and Coccidiosis		
	Nematodirus	Coccidiosis
Type of parasite	Roundworm	Protozoa
Main age affected	6-12 week old lambs	2-8 week old lambs (although disease can be seen up to 3 months)
Main time of year	April-June	April-June
Source of infection	Contaminated pasture	Contaminated pasture, housing, water
Key clinical signs	Sudden scour, dehydration, rapid weight loss	Dullness, weight loss, diarrhoea can be with or without blood accompanied with straining
When to treat	Based on SCOPS forecast and lamb age. Consult with your private vet.	Based on risk, environment and clinical signs. Consult with your private vet.
Treatment	White drench (benzimidazole)	Anticoccidial agent: diclazuril or toltrazuril
Prevention	Avoid high risk pasture, time treatment correctly	Keep good hygiene, reduce contamination build up and reduce stress where possible