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Welcome to your Farm Newsletter for November/December of 2023!

In this issue we look at Nematodirosis in lambs and the best ways you can prevent this infection during the lambing season and beyond. We explain the lifecycle of an adult Nematodirus, signs to look out for, practical treatment methods and finally, prevention and control of infections.

We also investigate Milk Fever in dairy cows, elaborating on the main symptoms, lasting effects, treatment and outlining the main points of a preventative strategy to ensure it doesn't affect your herd.

Please let us know what you think of these topics and any others you would like us to cover in upcoming newsletters.

Get in touch at farmandequine@ardenehouse.co.uk

See you next time,

The team at Ardene House Vets

In this issue:



Nematodirosis in lambs

Nematodirosis tends to occur every year in spring, which can lead to losses due to the sudden onset of the condition. We look into the clinical signs of the infection along with treatment so you have the tools to tackle it if it occurs in your flock.



Milk Fever – Prevention and Treatment

Milk fever is a metabolic disorder caused by low blood calcium that can have an effect on dairy cows before and after calving. We investigate the main aspects of the disorder and highlight what you should be looking for to identify, treat and most importantly, prevent it.

Nematodirosis in lambs



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Nematodiosis tends to occur every year in spring, which can lead to losses due to the sudden onset of the condition. There are couple of factors to consider when looking at preventative measures.

The key to success in tackling a Nematodirus battus infection is understanding its lifecycle, which is different to most of the other ovine gastrointestinal parasites.

The Lifecycle of Nematodirus

An adult Nematodirus worm lays eggs in sheep intestines, which are passed out in the faeces. In the case of Nematodirus, the larvae do not hatch straight away, but instead they slowly develop to invasive stage inside the egg. Infective larval stage is reached in the autumn, is very resilient and survives low temperatures over the winter within the egg.

After the larvae 'chilling' period, dormant larvae are activated once the temperature exceeds 10 degrees over a period of several days. Mass hatch of larvae, called 'spring flush' migrates onto grass and is eaten by the grazing lamb.

Timing is therefore critical and can have a consequential effect on lambs that are 4-8 weeks of age who are beginning to eat significant amounts of grass. Similarly, if a hatch happens to occur before lambing time, for example, then most of the larvae will have died before lambs start consuming grass and the disease would be unlikely to spread.

If lambs happen to be older than 3 months of age, they will be more resistant to infection as immunity will begin to build. There will of course be variation from farm to farm and even from field to field and you should assess the risk based on the history of the field.

A useful tool to predict Nematodirus invasion is a SCOPS forecast, where you can check when to expect it in your region (available online here: <https://www.scops.org.uk/forecasts/nematodirus-forecast/>).

In recent years, there have been more cases reported of the disease in autumn. Eggs deposited on a pasture in spring are hatching the same year in the autumn when the weather conditions allow for it. A cold spell followed by a temperature of 10-15°C for several days usually triggers Nematodirus eggs to hatch.

Signs to look out for

The signs of Nematodirus infection in your lambs are sudden diarrhoea and loss of body condition. Lambs appear dull and gaunt, and they will also be congregating around water drinkers as a result of dehydration. Growth rates will suffer and in some instances death may occur quickly.

Unfortunately, another issue is that Coccidiosis can occur at the same age and at the same time with similar symptoms. Treatment of both conditions is very different so you may need your vet to diagnose the problem.

Treatment of Nematodiosis

A Group 1 Benzimidazole (BZ) white drench is still the preferred option for the treatment of Nematodiosis in young lambs. However, there is a study underway to identify the scale of resistance in the Nematodirus battus parasite to white drenches.

On the farms where white drenches are used frequently it is a good practice to check your drench by examining the faeces sample of your lambs 14 days later for FEC (Faecal Egg Count), to ensure the drench was effective.

Remember that dosing is a cost to your business that is not just associated with the purchase of the product, but also the time and labour associated with the task.

Try and always dose animals based on weight, which can be achieved by weighing a sample of the group and then setting the dose rate based on the heaviest animals in the group. If there is a wide range of different weights, consider splitting the group and weighing the heaviest in each group to avoid underestimating body weight.



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Make sure that the animal is adequately restrained and use one hand to hold the animal under the chin, before administering the dose with the other hand, placing the nozzle into the side of the mouth to ensure that the dose goes over the back of the tongue. If unsure, always follow the instruction of the manufacturer, which is easily found on the bottle of your product. Finally ensure that your gun is calibrated properly and is working correctly.

Prevent and control

The best way to prevent and control *Nematodirus* infections is to avoid putting lambs on pasture

grazed by similarly aged animals in the previous year. Alternating lambs and cattle can work as a strategy to reduce worm burden, but it should be avoided where possible on farms where *Nematodirus* is a problem as calves can become sporadically infected.

A paddock grazing system is worth considering. Lambs graze on pasture for 3 days and then move to the next paddock in a 3-week rotation. Modification to the paddock system is also an option of forward grazing lambs where you provide access to better grass ahead of the ewes and lambs



Milk Fever – Prevention and Treatment

Clinical milk fever (hypocalcaemia) is a metabolic disorder caused by low blood calcium that can affect, on average, 4-9% of dairy cows before and after calving. It costs farmers around £220 per cow that suffers with it and can be fatal, even with treatment.

Subclinical milk fever can affect up to 60% of cows in a herd. Signs can be vague and include fertility issues, mastitis, metritis, reduced milk yields and displaced abomasums.

Shortly before giving birth, cows mobilise calcium from their body reserves to supply the increasing demands of their body. They need large amounts of calcium to produce the colostrum – calcium levels in colostrum are 8-10 times greater than that in the blood supply. Needing this amount of calcium from a standing start puts the body under pressure and calcium levels in the blood can fall dangerously low.

High-yield cows, Channel Island breeds and cows entering their third lactation are more susceptible to milk fever, but heifers are rarely affected.

Fat cows are also more susceptible since their feed and calcium intakes are higher and they normally have a high milk yield. It may seem counterintuitive, but feeding a high calcium diet in the two weeks before calving can contribute to milk fever.

This is because a cow's metabolism can become lazy and fail to mobilise the calcium from the stores around the body. Cows can gather more calcium from their stores than they can from feed. At calving the huge demands of milk production can take her metabolism by surprise leading to milk fever.



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Symptoms of Milk Fever

In most cases, the cow may seem excitable and twitchy. There may be tremors on the skin along the flanks, head and triceps.

This excitability rapidly changes to being dull and the cow may become unable to stand. Quite often they will stagger as if drunk and go down into a sitting position with a 'kink' in the neck.

The cow may have a dry nose, be staring into the distance with cold ears and legs. Her heart rate may seem weaker and faster, and her body temperature may drop, especially in cold, wet and windy weather.

Finally, she may lie flat on her side. This is the last stage of symptoms, after which she may suffer from complete circulatory failure, slip into a coma and die.

Lasting effects

1 in 20 cases of milk fever will be fatal. Cows that have had milk fever are more susceptible, so much so that 1 in 3 cows that have had it in the past will get it again.

It can also cause infertility, mastitis, metritis and issues with milk yield in the future. For every case of clinical milk fever, there are 3-6 cases of subclinical milk fever.



Treatment of Milk Fever

Immediate help is needed to correct the cow's blood calcium levels. As soon as you notice the signs described above, call your vet.

They will administer a slow intravenous infusion of calcium that has been warmed up to body temperature so as not to shock the system.

It's good practice to sit her up in a sternal recumbent position and turn her so she is on the opposite side to the side she was found on and turn her every two hours to try to combat other complications such as bloat and muscle necrosis.

Make sure she is protected from weather conditions and has access to water. In severe cases, your vet will suggest removing the calf.

Strategy

Prevention is better than cure so, doing everything you can beforehand to prevent milk fever is the best strategy.

- Avoid breeding from cows with a history of milk fever
- Prevent your cows from getting over-fat and make sure they get plenty of exercise
- Make sure her diet is sufficient in magnesium, >40g per day, in late pregnancy with long fibre included throughout
- Her calcium intake needs to be less than 50g a day during her dry period. That way the system for maintaining calcium will be on full alert and kick in when there is trouble
- Avoid stressing her
- Manipulation of dietary cation-anion balance (DCAB) in the dry cow diet is key

Speak to your vet to come up with the best strategy for you and your herd to make sure they don't suffer with milk fever.