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Here's your March/April newsletter, hot off the press!

We're taking a look at Grass Stagers this time. We run through what signs to look for, how to avoid it and what can be done to treat it.

Leptospirosis can cost a farm £69-£106 per cow that contracts it so, we have taken an in-depth look at the disease and what can be done to protect your herd.

Don't forget to let us know what you think about the topics we have covered this time and let us know if there is something you would like us to cover in upcoming newsletters. Drop us a line at clientcare@kingstonvet.co.uk.

Best wishes,

The team at Kingston Veterinary Group.

In this issue:



The Cost of Leptospirosis - A little investment goes a long way

Leptospirosis passed around a herd by direct contact with infected and recovered 'carrier' animals. But a fiver an animal could save you £££



Hypomagnesaemia - Grass Stagers

Grass stagers is one of the few true veterinary emergencies. The average annual incidence is under 1% and most cases occur in recently calved beef cows.

The Cost of Leptospirosis - A little investment goes a long way



Leptospirosis can have a severe effect on a farm, costing the farmer an estimated £69-£106 per cow in an infected herd. Weigh that against a vaccine costing around £5 per cow and you could wonder why only 20% of farmers are estimated to vaccinate their herd.

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What is Leptospirosis?

Causing abortion, decreased fertility and a drop in milk production, Leptospirosis is a nasty bacterial disease.

It is passed around a herd by direct contact with infected and recovered 'carrier' animals through:

- Urine
- Reproductive secretions
- Milk from acutely affected animals
- Contaminated water
- Via other species like sheep

It can also be passed onto humans, making it a zoonotic disease. In humans, it causes flu-like symptoms with headaches and a fever, sometimes progressing to meningitis.

During primary infection, and generally before the disease has even been noticed in the herd, animals shed leptospires in high volume in their urine, milk and foetal fluids. This shedding can continue for several weeks. Animals who have had leptospirosis, but have recovered, can continue to be an issue by becoming renal carriers and shedding leptospires in their urine.

If you are concerned about leptospirosis or whether you may have 'carrier' animals, give us a call.



Leptospires can be present in the urine, milk and foetal fluids of an infected animal.

The Symptoms

After the first phase of *Leptospira* infection in cattle, the bacteria gather in the urogenital tract. Early symptoms are usually mild and short-lived and this can mean they are often not noticed.

In cows, the first symptom is often a sudden decrease in milk yield. Abortions usually occur 6-12 weeks after the initial infection. If the infection occurs in the late gestation, an infected calf may be born.



Diagnosis needs to be confirmed by lab tests. However, diagnosis of leptospiral abortion is difficult and based on maternal and foetal blood tests. There are no outwardly obvious signs associated with the infection.

Abortion rates range from up to 30% in herds not previously infected to 5% in herds where Leptospirosis is endemic.

The greatest effects of infection on fertility are low pregnancy rates and increased culling due to low fertility.

How these symptoms manifest varies, depending on the infection status of the herd. In a chronic inactive state of infection, there are very few signs of poor fertility. During initial infection of the herd, or an inactive state that becomes active, the symptoms are more visible.

A natural immunity is established in a herd after the initial infection phase. All new animals that enter the herd are susceptible, however, and suffer from an acute infection with the associated symptoms. This is also the case with animals that were not with the infected herd during the initial infection but joined later (e.g. dry cows).

Diagnosis

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Isolation of Leptospires from blood, cerebrospinal fluid and milk can be attempted in acute cases. Cultures from urine samples can also be made from clinically infected or suspected carrier animals. The bacteria can also be isolated from organs of animals that died during the acute phase of disease. Samples need to be kept chilled and reach the laboratory within 3 hours.

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Other laboratory methods such as fluorescent antibody tests and dark field examination of blood and urine samples to detect live bacteria may also be useful for a definitive disease diagnosis.

In most farms, due to the level of pathogens, it is not economically feasible to test and cull all the animals. Unfortunately, blood tests are an unreliable indicator of infection status. All aborting animals or acutely infected animals should be isolated. Acutely infected animals can be treated with antibiotics such as dihydrostreptomycin.

Biosecurity and Vaccines

Maintaining biosecurity involves avoiding the introduction of infected animals into the herd and/or implementing strict isolation/quarantine of introductions until they are proven negative. Restricting access of livestock to external sources of infection e.g. double fencing is in place at all perimeters, prohibiting access to open waterways, etc., is always a good idea.

The best way to make sure your herd is Lepto-free is with vaccination. Give us a call so we can discuss the status of your herd and include this vaccine in your herd health plan.



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Hypomagnesaemia - Grass Staggers



Grass staggers is one of the few true veterinary emergencies. The average annual incidence is under 1% and most cases occur in recently calved beef cows.

The disease can occur in dairy cows, particularly where supplemented during the dry period. Despite its vital role in the body there are no specific mechanisms to control magnesium levels. The concentration of magnesium in the body is dependent on absorption from the rumen, how readily it is excreted by the kidneys and how much is sequestered for milk production.

Dietary Magnesium

The availability of dietary magnesium varies considerably according to grazing conditions, geography, soil type and pasture management.

High levels of potassium caused by the application of potash fertilisers disrupt the absorption of magnesium.

Lush pastures (during the spring and autumn) are low in fibre which speeds passage of forage through the rumen reducing the time for absorption of magnesium.

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Clinical Signs

Lactating beef cows around 4-8 weeks after calving are often found dead with disturbed soil around its feet (indicative of seizure activity/paddling).

Where the animal is found alive it usually displays excitability, high head carriage, muscle twitching, ataxia (a 'staggering' gait) and hyperaesthesia (very sensitive to noise and touch).

Cattle can also grind their teeth and show an exaggerated blink reflex. These clinical signs progress rapidly to seizure activity, recumbancy, paddling and death.

Some of the group may show subclinical disease. These cows may be nervous, show reluctance to be driven and have depressed dry matter intake.

Diagnosis

This is based mostly on clinical signs, inclement weather, grazing conditions, herd history and response to treatment. Grass staggers can be diagnosed based on blood samples run on in-house lab machines.

In cases of sudden death, samples taken from the eye (aqueous humour) can be tested for magnesium levels.

Treatment

It is essential to call us immediately if you suspect grass staggers. We can administer drugs to control seizure activity and begin intravenous treatment.



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Whilst you wait for us to visit after calling, administer 400mls of calcium borogluconate containing 40% calcium and 5% magnesium under the skin.

Under no circumstances give magnesium directly into the vein as this will result in the death of the animal you are attempting to treat.



Give us a call to discuss what will work best for you and your herd.

Prevention/control measures

The total diet should contain 2.5g/kg DM of magnesium to meet the requirements of lactating cows at pasture.

Magnesium chloride can be added to the drinking water however, it is relatively unpalatable so you need to make sure it is well mixed and make sure it doesn't become too concentrated.

On wet days cows may ingest most of their water from the pasture and take in less from the treated water trough. Intra-ruminal boluses give a prolonged release of magnesium over a period of four weeks and can be used prior to periods of risk (spring/autumn when pasture will be lush and relatively low in fibre). Pasture can be dusted with magnesium oxide. Powder should be applied early in the morning and the pasture should be strip-grazed throughout the week. Give us a call to discuss what will work best for you and your herd.

Slurry is high in potash so, early doses on grazing can exaggerate the potential risk. It is also recommended that you avoid potash application in the spring as this can lead to 'easy' uptake by the plant, offsetting the magnesium level in the rapidly growing grass plant.

If you have any concerns or want to discuss protecting your herd, give us a call for a chat.