BORDER VETS
Livestock Services

January/February NEWSLETTER!

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Happy New Year and welcome to our first newsletter for 2022!

In this issue we have covered gastrointestinal diseases in lambs and the significant impact lamb loss has on productivity.

We've also taken a look at unexpected deaths – a cause of worry and frustration for anyone who keeps livestock. Have a read of our article below that talks about how a post-mortem can be financially beneficial and have huge investigative value for your livestock.

We hope you find these topics useful. Let us know, when we are on farm next, what topics you think would be useful for us to cover here. We look forward to being your trusted partner and part of your team in 2022 and beyond.

Best wishes,

The team at Border Vets

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Lamb GI Diseases

Lamb losses in the first 48 hours of life are a significant drain on productivity and profitability of UK sheep farms, not to mention the welfare implications of high mortality rates. In 2011, lamb losses in Welsh sheep flocks were found to be around 15%, with nearly half of these being between birth and 48 hours of age. It is estimated that across the UK, losses sit between 4% and 21% in lowland flocks. Clearly, this figure varies from farm to farm but, the UK target is set at 6%, which is proven to be achievable with the correct management practices in place.

What causes lamb scours?

There are multiple pathogens involved in new-born lamb GI disease and 'scours', many of which are in common with those encountered with calves – Rotavirus, Escherichia coli (E. coli), Salmonella, Cryptosporidium and Clostridium perfringens type B. Other diseases and conditions come into play as the lambs get older however, in this article we will focus on the first 2-3 weeks of life.

Working from birth onwards, the first pathogens most likely to cause scour are E. coli and Salmonella. Both are common, environmental pathogens with healthy adults able to carry both without any clinical signs. Of the two, the most prominent and widely recognised is 'Watery Mouth Disease', an E. coli overgrowth in the small intestine and associated endotoxaemia. Lambs often present collapsed after a period of inappetence of around 2-6 hours. They develop an abdominal bloat and profuse salivation – hence the name of the condition. Disease progresses rapidly as the toxins produced by the bacteria enter the lamb's blood stream, and it is often fatal.

Rotavirus causes diarrhoea and lethargy, with lambs rapidly becoming dehydrated due to the fluid loss and lack of suckling. Luckily, cases of viral scours tend to be less common in lambs than we experience with calves.

Cryptosporidium parvum is a protozoan pathogen which is common on farms and often seen in calves. Lambs tend to be 5-10 days old when symptoms begin, with watery diarrhoea being the main sign. As the lamb becomes more dehydrated, the will to suckle is lost and the lambs become lethargic. If not treated promptly, lambs often succumb to this disease due to the dehydration or hypothermia.

Clostridium perfringens is a bacterium of which there are many strains, producing differing disease presentations at different stages of life. Lamb Dysentery is caused by C. perfringens Type B and lambs often have diarrhoea containing blood and mucous. This condition can be acutely fatal; however, lambs can also stop suckling and become lethargic, dying within a couple of days. Treatment of dysentery is unlikely to be successful, as is the case for most clostridial diseases.

Diagnosis of the pathogen involved can be achieved by testing of samples from affected lambs, or by post-mortem of lambs lost to disease. Particularly in the case of bacterial infections, the animals to sample are those which have not received antibiotics, as this could result in a false result, possibly causing confusion.

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Treatment

As you can see, except for watery mouth disease, lamb scour presents very similarly for all the causative pathogens, with diarrhoea and dehydration progressing rapidly to death without intervention. Due to the rapid deterioration of the affected lambs, promptly intervening and supporting lambs is vital to success when facing an outbreak of lamb scour. The most important aspect of the treatment of lamb scour is rehydration, which needs to be started early to maximise the chance of success. Oral rehydration is the most practical option in lambs. There are lots of products available on the market.

In lambs suffering with watery mouth, rehydration should be given at the rate of 50ml per kilogram, four times per day and products should always be mixed at the rate described on the packaging to ensure optimum action. In some cases, antibiotics can be beneficial. However, in many cases, it is the toxins released by the bacteria which cause the greatest problems rather than the bacteria themselves. Rehydration can be given by teat if the lamb will suckle or can be given by stomach tube.

Antibiotic use

Antibiotics should only be used after a discussion with a qualified vet to ensure the correct product, duration, and dosage. Blanket use of antibiotics has historically been used to control bacterial infections in young lambs. However, levels of resistance to antibiotics is climbing and human medicine is under growing pressure. This blanket use is no longer appropriate on farm, management changes in the run up to lambing can hugely help in the avoidance of these diseases.

How to prevent it

As with many conditions, preventing outbreaks is vastly more effective than treatment and by far the most important and influential prevention is colostrum.

Lambs are born with effectively no immune system, but colostrum is rich in antibodies which help protect the lamb in its early life and form the foundation of its immune system going forward. Ensuring lambs have access to the quantity, quality of colostrum they need, and quickly, is vital. They require 50ml/kg in the first two hours, with this value increasing to 200ml/kg by 24 hours.

If a lamb has not suckled in the first 2 hours, it should be assisted, or stomach tubed with colostrum to guarantee intake. The gut becomes less able to absorb the antibodies as they get older, giving us a short window in which to ensure they absorb as much as possible.

Supplementing colostrum with artificial sources should be done with care, as powdered products are not as good as ewes' colostrum. Ideally, if a ewe has surplus, this should be harvested and kept chilled or frozen for future use. Cows' colostrum can be used.

However, it should be noted that this contains a lower level of fat, so a larger quantity must be given to gain the fat supplied by a ewe's own colostrum.

To ensure the quality and quantity of colostrum available to the lamb, getting ewes in optimum body condition prior to lambing and ensuring proper feeding is vital. Protein intake in the run up to lambing is critical to colostrum production, so undertaking forage analysis, pre-lambing blood tests, and diet calculations can all help to build a picture of how the ewes are doing on their diet.

For lamb dysentery, there is a simple thing we can do to avoid the risk of disease. Vaccinating ewes against clostridial disease pre-lambing leads to a big spike in antibodies in the colostrum. Ensuring ewes are vaccinated as stated on the datasheet means you will get the maximum protection from that vaccine.

Hygiene

Most pathogens involved with lamb scour are environmental bacteria, commonly found in faeces. By focusing on hygiene in the lambing shed, we can reduce the exposure of lambs to these bugs, reducing the chance of developing disease.

Lambing sheds should be thoroughly cleaned out and disinfected prior to lambing beginning. Wet, mucky bedding is a huge reservoir for all sorts of bugs, so removing this and allowing the shed to dry before bedding up is important to reduce the contamination as much as possible. Applying disinfectants like lime before bedding can help this drying, or a wet disinfectant can be used and allowed to dry.

Once housed, ewes should be kept clean – which doesn't just come down to the bedding itself. A ewe with faecal contamination or diarrhoea can spread muck more widely and create a wet environment in the pen. Ewes with diarrhoea or dirty tails should be treated and cleaned or clipped to reduce the contamination.

Individual lambing pens where ewes and lambs bond are the most likely location for the lamb to pick up the bugs we have discussed. As we move through lambing time, the level of bugs builds, hence we tend to see more issues later in the block than we do at the start. Where possible, pens should be mucked out and disinfected between ewes to reduce this contamination as much as possible.

There are number of ways we can work with you to reduce the chances of outbreaks of lamb scour. Planning to avoid these issues is a year-round task, as ewe body condition has a direct effect on lamb birthweight, viability, and colostrum production. Body condition can be slow to change, so ensuring ewes are in good condition all year is important. Feeding then becomes even more important in the latter half of pregnancy, and particularly the final third. We can work with you to ensure their diet is suitable for the stage of pregnancy, providing enough energy and protein for the ewe and lambs. We can also help to review lambing shed hygiene to highlight any aspects that may have gone unnoticed.

Give us a call if you would like advice on how to avoid lamb scour and watery mouth this lambing time.

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Making the most of a bad situation

Anybody who keeps livestock will be familiar with those feelings of disappointment and frustration when you go to check the animals in the morning, only to find one that has died unexpectedly. Before calling the knackerman, there are two questions you need to ask yourself.

Firstly, are you confident of the cause of death and, secondly, are you confident that this is an isolated incident? If the answer to either of these questions is 'no', then consider asking us for a post-mortem to determine the cause of death.

It may be of more financial value than the loss incurred if the outcome of the post-mortem provides information that will improve the performance of others in the group and reduce any subsequent losses.

A post-mortem is the process of examining an animal that has died to determine the cause of death. During a post-mortem we will look for any obvious abnormalities on the carcass before beginning an internal examination. We can then assess the internal organs for any abnormalities.

Examining a live animal will provide lots of information which often allows diagnosis to be made. We can assess the animal's stance, behaviour, movement, temperature, anything that can be heard with a stethoscope and palpated on internal examination. All of these pieces of information are lost at death but, a post-mortem allows examination of what would normally be hidden from view. It provides the ability to appreciate the appearance and texture of the internal organs, and access samples which are hazardous or impractical to get in the live animal.

Any abnormalities found on an organ are referred to as 'pathology', and those that can be easily identified by eye are referred to as 'gross pathology'. Gross pathology is often characteristic and will allow us to make an immediate diagnosis and offer advice on preventative measures to be put in place to prevent further losses. Pulpy kidney, Fluke, Congenital heart defects, Pneumonia, Traumatic reticulitis (AKA a wire), Blackleg and Husk are just some examples of disease which can be diagnosed at the time of examination by characteristic gross pathology.

However, it is not always possible to make a diagnosis at the time of examination. Where there is an absence of gross pathology, the appropriate samples can be taken. Often this is from areas that are difficult to access in the live animal. For example, sections of the liver or kidney, small intestinal contents or sections of the brain and spinal cord can be taken and sent away to the lab for testing. This is often the case in certain toxicities and is impractical in the live animal.

In the case of copper poisoning in sheep, sections of liver and kidney need to be taken to assess copper levels but, this is a challenging procedure in the live animal.

Alongside the advantages of a rapid diagnosis, or the reassurance that the cause of death is likely to be spontaneous, a post-mortem can also give information for general disease surveillance among the herd/flock. We can assess the carcass for any evidence of disease, including but not limited to; ovine pulmonary adenocarcinoma (OPA) - which is a disease in the lungs considered to be one of the iceberg diseases in sheep causing losses to many flocks, pneumonia, and liver fluke. During a post-mortem would also be a good time to take some faeces for a worm egg count which could provide some information on the worm burden in that management group.

It is important to remember that it is still a legal requirement to report a sudden, unexplained death of a farm animal to DEFRA because of the possible involvement of anthrax. Anthrax is a bacteria, and the spores of this bacteria can last for long periods of time in the environment. It is rarely diagnosed in the UK but, is a cause of sudden death in cattle and sheep without prior signs of illness, and is potentially dangerous to humans. These investigations are less commonly requested now but, if the carcass is found with; blood oozing from the mouth/nose/anus, is on a previously known anthrax site, is on the site of a former hide merchant, knackery or abattoir, or where there has been recent soil movement, then an investigation may be requested. In this case, the carcass should not be moved and we can't begin a post-mortem until we have ruled out anthrax as the cause of death.

The reliability of an autopsy can reduce as the length of time from death increases. Some organs, particularly the liver and kidneys, will start to decompose rapidly after death, especially in the summer months. It is key for post-mortems to be performed within the first 24 hours of death but the sooner the better.

If the post-mortem is performed on-farm then it is useful to be done near a large drain and water supply. This allows you to wash away any material after examination is complete. It is also useful to have some bailer twine or heavy gauge string to allow closure of the carcass before it is loaded onto a knackery vehicle. Post-mortems do not need to leave a mess behind.

As a keeper of livestock, it is always better to be in possession of the facts so, if there is any uncertainty about the cause or significance of an animals death, please give us a call and ask for a post-mortem.

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