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*Welcome to your Farm Newsletter for September/
October of 2022!*

In this issue we investigate common diseases that can affect your sheep, as well as your bottom line, such as Enzootic Abortion of ewes (EAE) and Toxoplasmosis. Find out what you can do to avoid these diseases and how you can reduce lamb losses come springtime.

We also look at Infectious Bovine Rhinotracheitis, which is a highly infectious disease found in cattle that can have a serious impact on the lifetime welfare of your herd. Find out about clinical signs, transmission, diagnosis and what you can do to control the disease if it has already infected 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:



Tackling the effect of lamb losses on your bottom line:

Have you struggled with lamb losses due to common diseases in the past? We investigate the most common diseases that are linked with lamb losses and provide tips for control, as well as prevention, going forward.



Infectious Bovine Rhinotracheitis:

This highly infectious disease is not often fatal but can have a serious impact on the welfare of your herd. We provide tips on spotting the early signs, through to diagnosis and control if it happens to occur on your farm.

Tackling the effect of lamb losses on your bottom line



Continued 

Abortion in sheep is a common problem, costing the UK sheep industry up to £2 million a year. However, it shouldn't be seen as an inevitable part of the reproductive cycle for your flock. While an abortion rate of 2% is considered normal, rates above 2% can indicate an issue with your flock, meaning further investigation should be undertaken.

Lambing Percentage

The lambing percentage is considered a major factor when looking at the profit margins of a farm and even a small improvement can bring dividends. Diseases causing abortion, stillbirth and weak lambs affect this percentage but using practical and cost-effective solutions can influence the loss of lambs positively.

The Most Common Diseases

The two most prevalent diseases, accounting for over 75% of abortions diagnosed in labs nationwide, are Enzootic Abortion of ewes (EAE) and Toxoplasmosis. Recent surveys showed that a third of flocks tested have antibodies to both diseases. Antibodies indicate exposure of those ewes to the diseases. Four out of five tested ewes had antibodies to either EAE or Toxoplasmosis.

What is EAE?

The disease is caused by the bacteria *Chlamydia abortus*. It is a highly infectious and zoonotic organism. It directly damages the placenta resulting in abortion or the birth of weakly lambs. Abortions or birth of freshly dead or weak lambs usually occurs in the last three weeks of the ewe's pregnancy. Vaginal discharge, dead lambs and placentas from the affected ewes are heavily contaminated. The infection therefore spreads easily to other sheep within the same batch.

After aborting, the ewe may lamb normally in future, but she might be shedding the EAE organism and can be a carrier of the disease. The flock is often exposed when replacements are brought in. Wildlife and scavengers can also bring the disease to your farm. They can, for example, carry infected placentae from farm to farm.

How to control EAE

The big issue with this disease is its latency. As mentioned before, when an ewe aborts, she sheds huge numbers of EAE organisms. The ewe infects any ewe or lamb that they come into contact with. The catch is that these infected sheep show no signs of disease. Abortion does not always occur in these sheep at that point but in the subsequent pregnancy.

Due to the highly contagious nature of the disease, hygiene will be key in avoiding the spread of EAE. Considerable care must be taken when handling sheep during and after lambing. Careful disposal of dead lambs, placentae and contaminated material such as bedding is imperative. You should also clean and disinfect the lambing pens and isolate the infected ewe from the rest of the flock until the vaginal discharge has cleared – normally around six weeks. Other control measures include sourcing replacements from clean flocks and a vaccination protocol to protect your flock.

It is very important to note that this disease is a zoonosis and can be passed to humans and can cause abortion in pregnant women.

What is Toxoplasmosis?

It is a microscopic parasite called *Toxoplasma gondii*. It's most commonly found in cat faeces. Cats often pass faeces in feed stores, on bedding and on manure. A single cat dropping can contain enough eggs to infect more than 100 ewes. The eggs are ingested through water and feed on pasture or in forage. They can survive for over a year in the environment.

This disease isn't normally passed from sheep to sheep.

Ewes in the early stages of pregnancy can suffer with foetal absorption and appear to be barren if infected. Barren rates can be as high as 8-10% of the flock. Infection between day 50 and 120 can result in premature birth and still born or weak lambs. Sometimes, mummified foetuses will be born. However, non-pregnant sheep will develop immunity when they come in contact with the disease.



Toxoplasma is also a zoonotic disease. Pregnant women should not be allowed near the flock and lambing shed during the lambing season.

How to control Toxoplasmosis

Unfortunately, it is not possible to protect your sheep against Toxoplasmosis by keeping a closed flock. Vaccination is the only way to keep the sheep safe from this particular organism.

If you have young cats on your farm, make sure they are wormed regularly and try to keep your flock away from areas that they frequent. Cats become infected by eating small animals (normally mice) that are carrying the eggs. Once infected, the cat will excrete the eggs in their faeces. The cat will only be contagious for a few weeks, but the eggs survive a long time.

Other Diseases to keep in mind

Campylobacteriosis

- Caused by Campylobacter bacteria
- Spread by carrier sheep and wildlife
- No specific appearance to the aborted foetus
- Commonly, abortion occurs in late pregnancy and/or weak lambs can be born with a higher neonatal mortality
- A vaccine is available in other countries and has been imported by UK veterinary surgeons on occasions
- Zoonotic potential, humans can be affected!

- Caused by the strains of the Salmonella bacteria
- Spread by infected stock and contaminated food
- Commonly abortions occur in the last third of pregnancy
- No specific appearance for the aborted foetus but the ewes are often ill and have diarrhoea
- Antibiotics are effective
- Zoonotic potential, humans can be affected!

Listeriosis

- Caused by Listeria monocytogenes/ivanovii
- Spread by the bacteria being present in the soil and soil-contaminated silage
- No specific appearance to the aborted foetus
- Antibiotics are ineffective

If you experience a few abortions within two days, it would be highly recommended to speak to your vet. The vet can investigate and put in place protocols to keep your flock and your bottom line healthy.

It is important to re-iterate, that some of the above-mentioned diseases can affect humans - they have zoonotic potential. Pregnant women should not be near ewes and lambs during the lambing season. Specifically, Chlamydia (EAE) and Toxoplasmosis are dangerous to the unborn child. Hygiene in and outside the lambing shed is critical. Remember, clothes and utensils used in the lambing shed can be highly infective too!

Infectious Bovine Rhinotracheitis

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Infectious Bovine rhinotracheitis (IBR) is a highly contagious disease of cattle caused by Bovine Herpes Virus 1. The disease mainly presents as acute inflammation of the upper airways but also causes sporadic abortion, fertility issues, and occasionally inflammation of the vulva (infectious pustular vulvovaginitis) and penis (infectious pustular balanoposthitis).

Whilst IBR is rarely fatal, cattle cannot clear the disease so remain lifelong carriers. The virus resides latent within the animal and can reactivate at times of stress resulting in further shedding of the virus.

The disease is endemic within the UK with studies showing over 50% of herds are infected. The disease has serious impacts on animal welfare as well as causing economic losses and having trade implications.

Some European countries have eradicated IBR (Austria, Denmark, Finland, Norway, Sweden and Switzerland) and thus live exports to these countries require proof of disease-free status.

Clinical signs

Naive cattle of any age can be affected. Most cattle present with a high fever, nasal discharge and conjunctivitis (runny eyes). Affected animals will often appear depressed with reduced appetite and milk drop. Animals may also cough and have halitosis (smelly breath). Abortion tends to occur weeks to month after infection. In rare cases secondary bacterial pneumonia may result in death.

Transmission

The most common route of infection is through direct transmission of the virus via nasal and ocular discharge from acutely or latently infected animals. Though infection may also occur through semen or embryo transfer.

The virus does not survive well in the environment however some indirect transmission may also occur through equipment, staff, and airborne spread.

Diagnosis

Whilst clinical signs are often a good indication of the disease confirmation is made by testing for rising antibodies in paired blood samples. One sample taken during initial illness and the second 4 weeks later. The presence of rising antibody levels helps determine those primarily infected from those that are latently infected which will also have IBR antibodies.

The virus may be detected in ocular and nasal discharge using PCR.

When it comes to monitoring bulk milk samples can be used to assess the level of antibodies in the herd and thus indicate the prevalence of disease.

Control

Culling of infected animals will help break the cycle of infection though may not be feasible in herds with high prevalence. Therefore, it is recommended that in herds with high prevalence vaccination strategies are applied, whilst in herds with low surveillance test and cull strategies are used.

Multiple vaccines are available for IBR. Marker vaccines can help differentiate between those latently infected versus those vaccinated. This is crucial when trying to prove disease status of an individual animal or herd for selling or exporting.

Biosecurity is vital in preventing disease entrance on to farms, particularly those that do not vaccinate. Try to buy from IBR accredited herds and remember to quarantine and test any cattle brought in. Crucially farms must prevent any nose-to-nose contact with neighboring stock by double fencing boundaries.

Whilst IBR monitoring is not compulsory, farms should strive to become IBR free using either culling or vaccination strategies. Health accreditation schemes are also available.

