

Farm News April 2023

Clostridial Diseases in Sheep and their Control

Clostridial diseases are a significant problem in the UK sheep industry, causing huge economic losses each year.

These diseases are caused by bacteria belonging to the genus *Clostridium*, and have rapid onset, severe symptoms and high mortality rates in common, but with some important differences as well. In this article we will discuss the causes, spread, symptoms and most importantly control of clostridial diseases in sheep in the UK.

Causes and Spread

The different clostridial diseases in sheep are caused by several different species of *Clostridium* bacteria. These include:

- *C. perfringens* (subtypes causing pulpy kidney and lamb dysentery)
- *C. septicum* (braxy)
- *C. novyi* (Black disease)
- *C. chauvoei* (blackleg)
- *C. tetani* (tetanus or “lockjaw”)
- *C. botulinum* (botulism)

These bacteria are commonly found in soil and even in the intestinal tract of unaffected animals but can only cause disease when they enter the bloodstream through wounds or other routes.

The spread of clostridial diseases in sheep is facilitated by several factors, including poor hygiene, overcrowding, parasitism and stress. The worst outbreaks will be seen where stocking density is high as this increases the risk of the spread of the disease.

Other causes of stress, for example being in lamb, being weaned and rough handling can also weaken the immunity system, making sheep more susceptible to disease.

Clostridial diseases have been recognised for over 200 years. The prevalence of clostridial diseases in sheep in the UK has remained relatively stable in recent years, with occasional outbreaks reported.

However, the cost of clostridial diseases to the UK sheep industry is estimated to be in the millions of pounds each year, due to the high mortality rates (and massively decreased productivity) of affected animals where outbreaks do occur.

Symptoms

Symptoms of clostridial diseases in sheep can vary by species, but include sudden death, fever, abdominal pain and scour. As most species can cause sudden death, signalment (the animal’s age, feeding, the time of year etc) is an important part of diagnosis.

For example, lambs under 1 week are often infected with lamb dysentery (*C. perfringens*), whereas black disease (*C. novyi*) is associated with migration of liver fluke in later summer/autumn. Braxy (*C. septicum*) occurs with ingestion of frozen root crops in the winter by the previous spring’s weaned lambs. However, when the disease strikes, all three of these will often cause sudden death with no obvious other signs.



Control



To control and prevent clostridial diseases in sheep, farmers should implement good hygiene practices, ensure an appropriate diet is being fed and seek to minimise stress wherever possible.

Some stressors (such as being in lamb and being weaned) are unavoidable, but others (like parasite burden, overstocking and rough handling) can be minimised or avoided entirely.

Vaccination is also an important tool in controlling clostridial diseases in sheep. Combined products are available which cover many different clostridial diseases in an initial two-injection course followed by annual pre-lambing boosters. It is important to get organised in advance of lambing, as these may require as long as 6 weeks between doses to ensure maximum protection.

Ensuring good immunity in lambs is vital, as young animals are particularly susceptible to certain clostridial diseases, like lamb dysentery.

Unlike adult animals, lambs can benefit from two types of immunity – “active” and “passive”. Active immunity is that obtained from vaccination (or previous infection, but this is not likely with clostridial diseases as mortality is so high), while passive immunity is that which the lamb obtains from a vaccinated mother’s colostrum (first milk).

As lambs cannot be vaccinated until 3 weeks of age, this “passive immunity” is a particularly important part of clostridial disease control.

Ensuring good passive immunity has two steps:

- Firstly, ewes must be vaccinated with the right dose of an appropriate product at the correct time
- Secondly, it is vital to ensure good colostrum intake, as without this the lamb will not receive any passive immunity

It is known as FPT (failure of passive transfer) when lambs are left vulnerable to infection due to inadequate colostrum intake. To ensure good transfer of maternal immunity, lambs should receive 20% of their bodyweight in colostrum in the first 24 hours of life, ie one litre for a 5kg lamb. The FPT is not just an issue for clostridial diseases – affected lambs will be more vulnerable to other infectious diseases as well.

Summary

In conclusion, clostridial diseases in sheep in the UK are a significant problem for the sheep industry, causing significant economic losses each year. By implementing good hygiene practices, minimising stress and vaccinating at-risk animals, farmers can help to control and prevent these diseases and reduce the associated losses.

Additionally, it is important to be vigilant for symptoms of clostridial disease in your flock and seek veterinary assistance if you suspect that any animals are affected.

TB Wildlife Camera

A wildlife camera is available on loan from the Farm Office for those who want to monitor badger activity on the farm. Please contact the Farm Office on 01889 567200 for more details.

TBAS visits can also be booked free of charge with one of our TBAS trained vets.



Animal Health & Welfare Pathway Launch

Many of you will be aware of the Animal Health & Welfare Pathway launch and some will have already registered your interest. If not, you can use the link below. To register you will need to be claiming BPS. You will need your CPH number, SBI number and business email to hand. Currently, funding can only be used for one species per year although the plan is to allow multiple species claims in the future.

<https://apply-for-an-annual-health-and-welfare-review.defra.gov.uk/apply/register-your-interest>

The scheme consists of available funding for a vet review of approx 2 – 3 hours and disease testing along with access to a large variety of grants (further details can be found on the DEFRA website). Current funding for vet reviews will be available for an initial 3 years.

The minimum required number of animals and the funding available is detailed below.

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| • Beef Cattle | 10 cattle | £ 522 |
| • Dairy Cattle | 10 cattle | £ 372 |
| • Sheep | 20 Sheep | £ 436 |
| • Pigs | 50 pigs | £ 684 |

Once your eligibility has been confirmed by Defra, you will receive an agreement number along with guidance for the visit. You can then contact us to arrange a visit. The vet may ask you to forward the agreement number email.

After the vet review and the diagnostic testing results are returned, a report with a summary of the visit, lab results and all of the details to claim your funding will be issued. Funding must be claimed within 6 months of the agreement number being issued, so please consider this when thinking about the best timing for the visit especially for BVD youngstock screens (due to age restrictions) and sheep (ie summer better than winter). Lab tests must be carried out after an agreement number has been issued but the results may be used for other health schemes, eg the premium cattle health scheme.

Integrated Fly Control Using Fly Parasites

With the days lengthening and the weather turning warmer, spring will soon be here. However, that also means that the fly season is on its way, with all the unwelcome irritation and nuisance that flies cause to livestock and the people that work with them.



The commonly seen nuisance and biting flies, such as head flies and horn flies can cause a number of issues for cattle:

- Spread of bacteria that cause Summer Mastitis (the average cost of a case being £250-£300 – AHDB) and Infectious Bovine Keratoconjunctivitis (New Forest / Pink Eye)
- Irritability in the milking parlour – kicking, tail swishing, dunging
- Distraction from eating leading to reduced intakes and subsequently yield
- Compromised cattle welfare due to constant irritation

In recent decades, nuisance fly numbers have been controlled using insecticides such as Pyrethrins and Pyrethroids, in the form of aerosols and topical solutions. However, these chemicals are often unpleasant to handle, and can be hazardous to the people using them, particularly when spraying large quantities around the parlour.

There are alternative approaches to fly control that can substantially and naturally decrease nuisance fly populations on farm. Fly parasites have been available in the UK for a while but are still relatively unheard of in the agricultural industry. These tiny insects are natural parasites of our nuisance fly species and are used commonly in the poultry sector as part of biological integrated insect control programmes.

Contact the Farm Office on 01889 567200 to place an order or request more information



Farming Equipment and Technology Fund

The Farming Equipment and Technology Fund grant supports improvements in livestock health and welfare, offering between £1,000 and £25,000 towards the cost of items from the list in the guidance following the link below

The grants are open to livestock farmers who keep cattle, pigs, sheep, broilers or laying hens. Find out more about the benefits these grants can bring for happier, healthier and more productive livestock which are good for your business by reading Defra's new Farming blog post.



The application portal is open from 23 March until 15 June 2023. If you're interested in applying, Defra encourages you to discuss the grant with your vet first, to get advice on which items would best help your livestock

Please also read the guidance on GOV.UK and the **full list of items on offer** before making an application. These grants are the next step on the Animal Health and Welfare Pathway.

More information can be found using the link below

<https://www.gov.uk/government/publications/farming-equipment-and-technology-fund-fetf-2023/about-the-farming-equipment-and-technology-fund-fetf-2023>

Booking your TB tests

Spaces in the diary are filling up quickly for TB testing over the next few months, so please book your test as soon as possible. We have 3 Bank Holiday Mondays in May (1st, 8th and 29th) which may reduce our testing availability during this period.



FORTHCOMING EVENTS

Mastering Medicines Course Friday 21st April at 2pm

We hear more and more about antibiotic resistance in the news these days and responsible medicine use is a 'hot topic' in the farming world.

Our Mastering Medicines Course content includes:

- ✓ Safely administer veterinary medicines to animals under your care
- ✓ Describe basic differences that exist between different classes of antibiotic and the need for veterinary guidance for their use
- ✓ Describe the basic classes of anthelmintics and the need for veterinary or SQP guidance on their use
- ✓ Store and maintain medicines on farm in accordance with legislation and farm assurance requirements.

Please contact the Farm Office on 01889 567200 to book your place

Staffordshire County Show

If you are heading to the County Show this year, we'd like to invite you to visit us on our stand.

31st May & 1st June

Our vets will be on hand to chat and give advice and information on any questions you may have.

Looking forward to seeing you there

