April 2024 Newsletter

This month we thought we would walk you some of the serious infectious diseases that are swirling about and how they can appear on your farm.

Bluetongue

You will have likely heard that Bluetongue has been found on the south coast of England. It is a notifiable disease meaning that if found or suspected APHA must be contacted immediately.

Bluetongue is a viral disease affecting cattle, sheep, deer, goats and camelids. Sheep are the worst affected clinically but cattle act as the reservoir – producing large quantities of the virus. There are many virus strains – meaning that an animal that is infected with one strain will be immune to it in future but not other strains.

Bluetongue is spread by biting midges (Culicoides) and generally NOT from direct contact with infected animals, generally cases increase in the late summer and autumn in Europe as midge populations increase. The risk to the UK is due to midges being carried over the channel by prevailing winds. Clinical signs of Bluetongue swelling of the face and ears, facial oedema, nasal discharge and excoriation, drooling, conjunctivitis, high temperatures and a stiffness and reluctance to move. Diagnosis is based upon clinical signs and blood tests. Treatment is limited to control of the secondary bacterial infections, not the bluetongue itself.

Control and Prevention -Control focuses on the midges with pour on insecticides, currently we would not expect Bluetongue to ever reach this far north but with ever increasing global temperatures it may become more of a problem in the future. Prevention is generally through the bluetongue vaccination – the main takeaway from these vaccinations is that there is not cross-protection between serotypes – the main UK vaccination is BTV-8 – this protects against serotype 8 but no others.

Schmallenburg

Schmallenburg virus can infect and cause disease in cattle, sheep and goats. It has been reported in other ruminants but not shown signs of disease. It is thought that we may have a recurrence this year as the percentage of naive stock in the flock/herd increases. Like Bluetongue, this disease is spread by midges, does not spread directly from animal to animal, spread is most likely in summer/early autumn when midge populations are highest.

Clinical signs of acute clinical disease in adult cattle present as fever, reduced milk yield, inappetance, loss of body condition and diarrhoea. Adult sheep and goats generally do not show signs of disease. The main concern with Schmallenburg is that it **crosses the placenta** to affect the growing calf/lamb/kid in pregnant animals. The most susceptible stages for foetal deformities are 62-180 days in cattle and 25-50 days in sheep (older foetuses are generally able to clear the virus themselves). The virus affects foetal nerve tissue and causes brain and spinal cord abnormalities with secondary muscle and skeletal problems leading to nerve damage. Affected foetuses can be born alive or dead or aborted. They often have bent limbs and/or fixed joints, some animals are born with a normal appearance but present with blindness, ataxia, recumbency.

It could be mistaken for Border's disease, BDV affected calves, swayback, toxoplasmosis, bacterial meningitis.

- **Treatment and control**
    - There are currently no vaccines available in the UK

    - Depending on the severity of the limb deformity – animals delivered successfully may have to be euthanised
    - Animals found to have limb deformities during calving/lambing will likely need caesarean sections, excessive force must not be used as this may risk injury to both the ewe and lamb or cow and calf.
- **Testing (APHA)**
    - APHA is continuing to offer free-of-charge testing in 2024 on samples from lambs and calves born with congenital malformations or musculoskeletal deformities.
    - A fresh brain sample (brain stem is preferred) - please contact us if you have a case that you think is relevant.

Tuberculosis

The North East of England remains a low risk area (LRA) for TB, this means that we remain on a four-yearly routine surveillance testing for most cattle herds. Radial testing can be indicated for any herds within a 3km radius of a cattle herd with an OTF-W (Officially TB free – withdrawn – where at least one test reactor or inconclusive reactor has post mortem evidence of M.bovis (TB) infection.)

BVD (Bovine Viral Diarrhoea)

BVD is a viral disease that casues reproducitve losses and a range of other disease syndromes in cattle. The virus is contracted from contact with infected cattle, it is also sexually transmitted.

Animals that are infected as adults usually recover from the virus and become immune however it is transmitted across the placenta from cow to calf. Animals that are infected in-utero are born persistently infected (PI) with the virus. These animals will excrete large volumes of the virus all their life and will be the main source of BVD on your farm if present.

- Clinical signs
    - Cattle exposed to BVD virus show few clinical signs but can lower immunity to other infectious diseases such as
        - Salmonellosis
        - Respiratory infections
        - Coccidiosis

BVD virus infection during early pregnancy can cause embryonic death and return to oestrus, foetal death/abortion, mummification of the foetus, birth defects of the nervous system and eyes, weak/premature calves and live persistently-infected calves.

Infection of the foetus **before** 110/120 days of pregnancy results in the birth of a live calf but **persistently infected** – these animals are often noticeably smaller and less healthy as they develop compared to the rest of your calves.

BVD virus can be spread in the semen of PI bulls or bulls experiencing acute BVD – testing for BVD is essential for all purchased bulls prior to their use on farm.

Control and treatment

- Keep a closed herd
- If buying in cattle – only purchase from BVD accredited herds

- If buying in cattle from non-BVD accredited herds you must blood test and isolate them before introducing them to the herd
- Double perimeter fencing to prevent contact with cattle on neighbouring farms
- PI calves must be culled ASAP
- **Vaccinations**
    - Various BVD vaccines are available – all of them require a primary course to be completed prior to first service with regular boosters.

Johne's

Johne's disease is a chronic enteritis of adult cattle and sheep caused by mycobacterium avium subspecies paratuberculosis.

Transmission is mainly from ingestion of faeces of infected animals, this can be through contaminated food and colostrum, water troughs and surface water. There is some evidence of intrauterine infection in heavily infected dams.

There is a long incubation period and clinical disease is not usually apparent until 3-5 years old, infected animals may shed faeces for over a year before clinical signs appear.

Clinical signs

Progressive (often rapid) weight loss and chronic diarrhoea

Control and prevention

There is no single reliable test for confirming johne's disease, especially during the early stages of the disease.

Generally we blood sample for antibodies, the test's sensitivity is 30-60% therefore there is the potential for some positive animals to be missed. Often if there is a positive blood test then faecal testing is done.

Control comes down to a few major points:

- Rapid culling of diseased animals
- Minimise faecal contamination of food, water and pasture (raising feed and water troughs)
- Do not feed waste milk to calves, do not raise calves from known infected dams
- Re-stock only from accredited herds – especially bulls

Vaccination

- Vaccines can be imported into the UK however these do not prevent infection, only reduce the clinical cases and reduce losses, it will not help eradicate Johne's from your farm.

Neospora

Neosporosis is caused by a protozoa and accounts for over 10% of all abortions in UK cattle. Abortion is caused in cattle, sheep and horses, dogs and foxes are the final host.

Clinical signs

- Abortion between 3-9 months of pregnancy
- Still birth or premature calf
- Occasionally, calves will have brain disease at birth
- No other signs seen in the mother
- Repeat abortions are possible in the same cow

Diagnosis

- Antibodies can be detected in the dam's blood
- Aborted calves can have characteristic heart and brain damage
- Parasite can be detected in calf's tissue

Treatment

- There is no treatment of any proven benefit

Prevention

- Main concern is transmission from mother to calf, over 90% of calves born to mothers with antibodies to neospora will have been infected in the womb.
    - You must identify infected cattle – all cattle with antibodies to neospora are a source of infection to their calves. Cattle with antibodies are 20 times more likely to abort between 3 – 9 months compared to cattle without antibodies.
    - Select only seronegative cattle for breeding – if you dont cull seropositive cows, ensure that you only breed them to beef bulls – heifers with antibodies should be sold for meat not bred
- Dogs are potentiall a source of disease
    - Keep cattle food and water away from dogs and foxes
    - High hygiene standards at calving
        - Disposal of placental membranes, aborted or dead calves before dogs can get them