Farmers warned of increase in cases of Blackleg

Clostridial disease Blackleg was the second most-common diagnosis made when growing cattle underwent post-mortem examinations at Farm Post Mortems Ltd between June and August 2017. Katie Waine, currently undertaking a pathology fellowship funded by AHDB Beef & Lamb and MSD Animal Health has continued to see this rise through September and October.

It is most commonly caused by the bacteria Clostridium chauvoei which is normally found in soil and the faeces of cattle. Less commonly Clostridium septicum or Clostridium novyi can cause similar lesions. Infection most often affects young growing animals (typically six to 12 months), with an increase of cases seen when animals are turned out. Outbreaks may occur, especially where earthworks are being undertaken on farm due to exposed bacteria in soil.

The bacteria form spores, which after being eaten by cattle can be absorbed into the blood stream and then lie dormant in the muscle. Damage from trauma, such as injuries at the feed barrier or bruising during bulling behaviour, provide the right conditions within the muscle for the spores to ‘wake up’. The bacteria then proliferate and damage the muscle tissue. Cases of blackleg with no history of trauma can also be seen and may be associated with exposure to a particularly heavy load of bacteria.

Affected animals are usually found dead, but cattle can have a high temperature (>41˚C), be depressed and off their food. Where the muscle of one leg is affected, sudden onset lameness may be seen. Affected muscles are filled with gas bubbles and can feel swollen and crackly under the skin. An initial diagnosis can be made on history, clinical signs and post mortem findings, but laboratory tests are required to confirm the diagnosis. Haemorrhagic muscle necrosis is seen at post mortem (Figure 1 and 2) and can affect skeletal or heart muscle.

Prevention by vaccination is the best approach as treatment with antibiotics is unlikely to be effective unless started in the very early stages. Vaccines are cheap and highly effective. There is a vaccine available which only covers Blackleg, but it is also covered by multivalent Clostridial vaccines. Talk to your vet for advice for your farm. Several clostridial vaccines are broad spectrum, so will also prevent other important clostridial diseases like Black Disease (important on flukey farms), clostridial abomasitis, and disease caused by Clostridium perfringens (pulpy kidney).

Vaccinations should be given to animals from three months of age onwards and they require two injections three to four weeks apart. Immunisation needs to be completed two to three weeks before the period of risk, this will vary depending on the date of turnout. A yearly booster of a single injection should be given two to three weeks before the period of risk. The interval for booster injections should be no more than 12 months. If cows are vaccinated a month or so before calving, then significant protection for calves will pass through colostrum. Blackleg can also affect sheep and vaccines are also licensed for their use.

For more information, see the BRP Beef Diseases Directory