Coccidiosis in calves and lambs

Coccidia are single celled intracellular parasites called protozoa. There are many different species of coccidia. Some coccidia do not cause any problems in the host animal and sit there quietly minding their own business. However in calves and lambs there is a handful of coccidia species that can cause a significant problem due to their life cycle damaging cells in the intestine as they reproduce. The particular species that cause disease are different in lambs and calves. Due to the life cycle of the coccida calves and lambs will not be affected until they are at least 3 weeks of age. A calf or lamb showing clinical signs will typically pass diarrhoea associated with lots of straining and there is often blood or mucous in the faeces. Very severely affected animals can dehydrate and die quickly; more commonly, affected calves will be lethargic, in-appetent and loose weight. Calves and lambs affected in such a way are often the tip of the iceberg and looking at the rest of the group may reveal many animals with faecal matting or staining of hindquarters. These animals can be sub-clinically affected and are not obviously ill but it is their performance that will suffer in terms of decreased weight gains and impact on feed conversion efficiency, in turn increasing feed costs. In some cases you may just have a group of animals that you feel is not achieving its full potential.

Coccidia are generally present everywhere, it is when conditions are just right that problems occur. Affected animals will produce large numbers of eggs (oocysts) in their faeces, this leads to a rapid increase in the environment as more animals become affected. Rigorously applied hygiene principles are important in reducing numbers of oocysts i.e. anything that achieves a clean, dry environment for the calf or lamb. One of the major risk factors is the cleanliness in and around water troughs, calves or lambs mucking in the troughs provides an ideal way of infecting the whole group, so pay close attention to cleaning out and disinfecting troughs on a regular basis. If troughs are constantly contaminated, it may be that they are too low and raising them a few inches could be beneficial. For animals at grass, poaching around water and feed troughs or mineral buckets can cause heavy contamination. Complete disinfection of housing between batches will give the best possible chance to really reduce oocyst numbers in the environment. The oocysts are resistant to most commonly used disinfectants so check what you are using, steam cleaning > 60°C is effective. Stressful events such as disbudding, castrating and mixing groups can be a trigger.

Diagnosis is based on determining the number of coccidial oocysts in a gram of faeces. We can carry this out in house. Calves or lambs that have diarrhoea caused by coccidiosis may not actually have any oocysts in their faeces as damage to the intestine occurs before oocysts are produced. Therefore when collecting samples it is important to include apparently normal animals as well as those affected, to get a good picture of what is happening. Coccidiosis, whilst usually a problem in young animals around 3-6 weeks of age, can occur in older animals especially at times of stress. Treatment is aimed at interrupting the life cycle of the coccidia and reducing the number of oocysts excreted. There are products administered as an oral drench that achieve this e.g Vecoxan or Baycox 50mg/ml. There is also a product available for inclusion into feed, called Deccox. All these products can be used prophylactically to prevent disease during expected risk periods. In severely affected animals oral rehydration e.g life aid etc should be administered and consideration given to antibiotic use where secondary infections are a concern.
Introducing Gethin

Gethin

Originally from a farming background, I spent most of my youth running around the Welsh hills after sheep on the family’s beef and sheep farm (all for harmless fun honestly!). When my parents had enough of me I was sent north of the border to Glasgow to study to become a vet. In 2004, after 5 years of hard studying (really there was no partying!) they sent me out into the real world.

I have spent the last 9 years vetting in the Welsh borders and North Wales, mainly farm work with a mix of dairy, beef and sheep. Since qualifying I have become interested in fertility, and am currently studying towards the Diploma in Bovine Reproduction (DBR) for my sins! I also have experience in sheep advanced breeding, as well as mastitis investigations and nutrition. Outside of work, I am kept busy by my two young children and wife, and also enjoy admiring the Welsh rugby team (sorry!) when time allows.

New Disease Page on Website

We have added a great new reference page for farmers on our website. The page links up with the latest disease alert and parasite forecast webinars provided by the National Animal Disease Information Service. The page is updated every month so please make it part of your regular monthly routine.

Sheep lameness

Good mobility is not just important in the dairy industry. All livestock production systems are more efficient when livestock are free from lameness and obviously welfare is also better. Sheep are no exception to this!

For the most part vets are not involved in the treatment of routine cases of sheep lameness as this is typically carried out by the shepherd. Our role is to advise and train those in diagnosing and administering treatments and to get involved when the response to treatment is not what it should be. Scald, footrot and CODD (contagious ovine digital dermatitis) are the most common causes of lameness in sheep and although they have been around for a long time research continues into the best ways to control them.

Scald is inflammation between the toes often brought on by wet weather and long grass or thistles which cause a degree of physical trauma.

Footrot causes a more significant lesion as the hoof separates from the foot and the lameness is much more pronounced.

CODD is a more recent cause of lameness in sheep, where the hoof wall can (if not treated) slough off the foot and can spread rapidly throughout a naive flock.

Surveys have shown that, on around 90% of farms in the UK, scald cases will progress into footrot and can lead to CODD outbreaks if left untreated. The current evidence suggests that they are all related in one way or another. The key to controlling footrot therefore is aggressive, prompt treatment of scald before the hoof separation begins. A suitable treatment regime involves:

1. Treat lame sheep as soon as they are noticed, don’t wait.
2. Isolate lame sheep from the main flock where possible
3. Only trim overgrown feet, don’t over-trim or go looking for blood! (Current research shows that trimming may make lameness worse within a flock!)
4. Treat aggressively with systemic and topical antibiotic e.g. oxytetr spray and LA injection
5. Clearly mark the treated leg with marker spray and assess response to treatment after 7-10 days

New cases should respond well to this treatment if administered promptly and if they are walking sound when reassessed they can re-join the flock. If you are seeing a large number of new cases over a short time span then foot bathing can help to control the outbreak. Typically a 10% solution of zinc sulphate is suitable with sheep forced to stand in it for 2 minutes (repeat weekly if necessary) and returned to a clean pasture which has not been grazed by ruminants for at least 2 weeks. More advanced cases need to be discussed with your vet and may need an antibiotic footbath.

Vaccination with the live vaccine Footvax can assist in reducing the amount of lame sheep on problem farms if used correctly.

Chronic cases which don’t respond well to treatment and repeat offenders should be culled from the flock as they act as a reservoir of infection, have compromised welfare and are not economically viable. If you would like further information about lameness or help in tackling lameness in your flock then speak to one of the vets for farm specific advice.