
COCCIDIOSIS IN CALVES

Coccidiosis in calves causes intestinal damage, resulting in depressed growth and performance and greater susceptibility to other infections. Fortunately, where there is a known history of coccidial infection, outbreaks can be prevented with pro-active herd health planning.

Coccidiosis is caused when cells in the lining of the animal's gut become infected with a single-celled 'parasite' of a species called *Eimeria*. Its life cycle ultimately leads to the destruction of the cell. This parasitic infection is spread to other animals when it reproduces by forming oocysts.

An infected calf will shed millions of coccidial oocysts in its faeces, every day. Other calves contract the infection when they consume these oocysts from the environment.

Many coccidial infections exist at a sub-clinical level, and so it is often not tested for. Yet an underlying coccidial infection will still cause production losses.

Signs of coccidial infection

The first obvious sign of coccidial infection is a calf with scours. But this is just the tip of the iceberg. Coccidiosis is highly contagious, so all in-contact calves will be carrying some level of infection too, even if it is sub-clinical.

Scouring usually begins about two weeks after infection. So by the time a calf is showing clinical signs of coccidiosis, the damage to the intestinal lining has already been done.

Other signs of coccidiosis are shown in the table below.

Signs of coccidiosis	
Loss of appetite	Reduced feed intake
Retarded growth	Dehydration
Secondary infections	Death (in severe cases)
Watery diarrhoea accompanied by straining mucus and blood	

Diagnosis

An analysis of faeces will confirm presence of coccidial oocysts. Samples will be collected not just from the scouring calf but also its pen mates, as peak oocyst-shedding often does not correlate with the diarrhoea.

In some cases, repeat sampling may be needed to catch the presence of oocysts in the faeces. Once identified, appropriate treatment at an appropriate time can be recommended, stopping any further losses.

Herd health planning

Once coccidiosis has occurred on a farm, it will most probably occur again - with or without the presence of scours. Even with sub-clinical coccidiosis, calves suffer an increased susceptibility to other bacterial infections, costing time and money to resolve.

So to prevent a sub-clinical or clinical outbreak of coccidiosis from limiting calves' future potential, pre-emptive treatment needs to be factored into herd health plans.

As with all infectious diseases, it's important to take an integrated approach to control. Where a farm has a track record of infection, consult with your vet and take pre-emptive action. Also pay particular attention to hygiene and management.

Pre-emptive treatment

Where there is a history of coccidial infections, it is possible to calculate when an outbreak of coccidial scours is most likely to occur, and consequently the best time to administer preventative treatment. For example, coccidial scours typically occur two weeks after housing calves together, but this will vary from farm to farm depending on management routine. All calves that have come into contact with a coccidia-infected calf, or that are being kept in an environment with a history of infection, will need treating.

There are two types of preventative treatment for coccidiosis:

- 1) An in-feed coccidiostat fed for 28 days, which stops further reproduction and growth of coccidia.
- 2) An oral administration of a coccidiocide to destroy the coccidia and prevent the clinical signs of coccidiosis. This also significantly reduces the levels of oocyst excreted, reducing the disease pressure and helping safeguard other calves from developing infection.

Hygiene

Coccidial oocysts are very persistent - existing for over a year, able to withstand freezing temperatures, and resistant to the majority of disinfectants. So a high infective pressure remains long after calves have stopped scouring.

Where possible, operate an 'all-in all-out' policy with effective cleaning and disinfection in-between batches of calves.

Management

Isolate scouring calves to allow them to be treated effectively and to reduce the risk of disease transmission to others in the group.

Minimise environmental stresses - temperature, moisture levels, draughts and reduce risk factors (see table below)

Risk factors for coccidiosis	
Poor ventilation	Draughts
Poor calf nutrition	Group pens
Heavy stocking	Cows present with calves
Soiled bedding	Warm ambient temperatures
Presence of coccidia-infected calves	