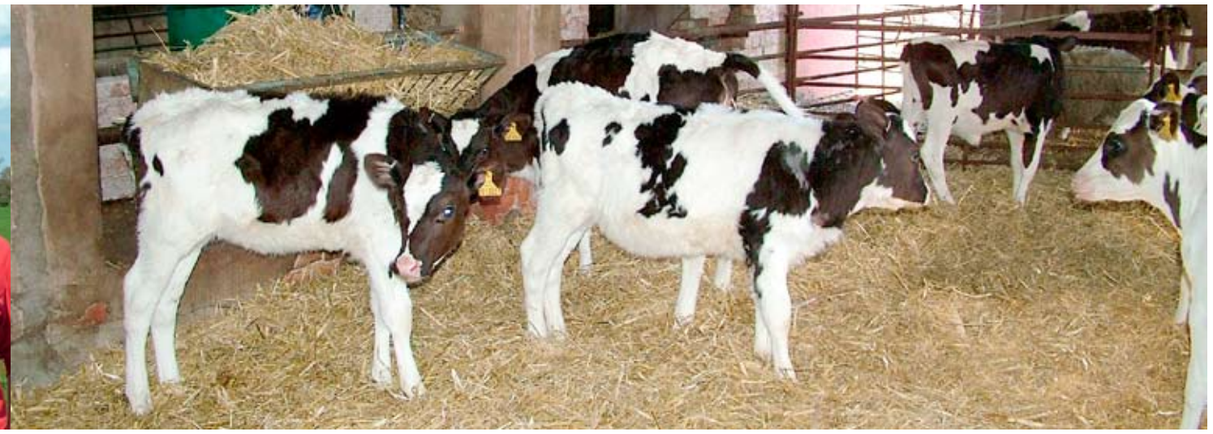
Coccidiosis – up the anti

A proactive approach is key to tackling insidious disease

Coccidiosis in calves is more common than you might think. We spoke to a vet and producer about their experiences of identifying and controlling this insidious – and debilitating – disease. Read on and see if it could be to blame for problems on your unit.

Clive Hanselmand and vet Sara Pedersen



Calves are now thriving and meeting their growth targets at Clive's unit

Coccidiosis is highly contagious, so all calves 'in contact' with a sick calf will also be carrying some level of infection. The consequences? Intestinal damage, depressed growth and performance, and greater susceptibility to other infections.

A single calf with diarrhoea is just the tip of the iceberg where coccidial infection is the cause. Due to its highly contagious nature, one scouring calf signals the fact that all calves will have some degree of sub-clinical coccidiosis, in which infection is damaging their intestines despite there being no outward signs of illness.

As farm systems become more intensive, the number of coccidiosis cases are increasing, particularly during the warmer summer months. In fact, coccidiosis has been cited as the most common intestinal disease diagnosed in calves between three weeks and three months of age. It's also thought to be the second most important cause of actual scouring in calves, after rotavirus. So when you next see a scouring calf, don't automatically assume the cause is rotavirus, or E coli. It could be coccidiosis. And, if so, all its pen mates will either already be infected sub-clinically, or at significant risk.

One producer who knows first hand just how insidious and devastating the disease can be is Shropshire-based producer Clive Hanselman. He runs a 200-cows herd at Fir Tree Farm, near Whitchurch, and he's just one of many producers who proactively prevent outbreaks of coccidiosis on farm through administering an oral dose of coccidiocide – he recently switched to Baycox Bovis to ensure once-only treatment.

Steam cleaning

But he hasn't always taken this approach. Back in 2006 problems with calves that simply wouldn't thrive came to a head and he even saw some fatalities.

"We were doing everything we could – keeping the calf house clean and well ventilated and even using a different coccidiocide – but nothing seemed to work. There was still something holding the calves back," says Clive.

On-farm post-mortem showed evidence of mild pneumonia and coccidiosis was suspected as the cause of wasting, hence the use of the coccidiocide. But previous faecal sampling from calves had not revealed any coccidial oocysts. Re-sampling by Clive's vet Sara Pedersen, of Lambert Leonard and May vet group, did, however, reveal evidence of the disease and she prescribed Bayer's oral coccidiocide.

Clive's herd calves all year round. Bull calves are sent to a buying group at two weeks of age. Using the buildings available on the farm, Clive houses the heifer calves in one of three calf-rearing areas, grouping them in batches of about 12, and rearing them on milk replacer.

"We give them all an oral dose of coccidiocide as soon as they are about to come under stress – at between five and six weeks old as calves are weaned. And we also steam clean the housing between batches of calves and ensure that the housing stays dry and well ventilation when stocked – good husbandry is also key to disease prevention," says Clive.

Dosing the calves with the coccidiocide is now a one-man job. "Previously we were finding that between seven and 10 days after dosing that calves were getting diarrhoea, so we were having to dose a second time, and in some cases even three times. But since switching products we can do the job once."

Vet Sara Pedersen says that identifying the presence of coccidiosis can be tricky, which is why the disease often goes un-diagnosed: "Because many infections exist at a sub-clinical level, it's often not tested for. Yet there are production losses which probably occur due to an underlying coccidial infection. For example, post-weaning scour which often occurs when calves are weaned and are batched together – a stressful time for them."

Disease persistence

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.

Coccidial oocysts are very persistent. They can exist for more than a year, withstand freezing temperatures and resistant the majority of disinfectants. So a high infective pressure remains long after calves have stopped scouring.

Once the disease 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 your calves' potential, pre-emptive treatment needs to be factored into your herd health planning," says Sara.

Scouring usually begins between two and three weeks after infection and by the time a calf is showing clinical signs of coccidiosis the damage has already been done and with every oocyst ingested having the potential to result in up to 24 million oocysts being released into the environment, this poses a significant risk to all calves on the unit.

Preventative treatment

There are two types of preventative treatment for coccidiosis. One option is an in-feed coccidiostat, which stops further reproduction and growth of coccidia. However calves must consume a sufficient dose of the drug each day for 28 days, for treatment to be effective.

The other choice is oral administration of a coccidiocide – to destroy the coccidia and limit oocyst shedding.

Baycox Bovis is a convenient single-shot coccidiocide licensed for dairy calves. It prevents the clinical signs of coccidiosis and also significantly reduces the levels of oocyst excreted. This reduces the disease pressure and helps safeguard other calves from developing infection.

This oocyst-suppressing effect has also been shown to last a long time and still allows the calf to develop its own immunity to the infection, which means that one shot is enough to protect the calf for its whole life.

"For maximum benefit, animals should be treated about one week before the expected onset of clinical signs. But this treatment timing will vary, depending on management practices and the farm's history of the disease. But overall, it really is a case of 'prevention is better than cure'," she adds.

As with any infectious disease, Sara says that it's important to take an integrated approach to control and pay particular attention to hygiene and management.

"Scouring calves should be isolated to allow them to be treated effectively and to reduce the risk of disease transmission to others in the group. And make sure you minimise other environmental stresses – temperature, moisture levels, draughts."

Rachael Porter

Coccidiosis symptons and risk factors

Signs/symptoms of coccidiosis

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

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