

Coccidiosis in Calves

By Dr Chris Crickett

Coccidiosis is a significant disease in weaned dairy calves between the ages of one and six months of age, and although uncommon in older cattle, occasional cases and outbreaks have been reported.

At least thirteen different species of coccidia affect cattle and all are intracellular protozoal parasites of cells lining the intestinal tract. Species affecting the small intestine generally produce minor clinical problems, as damage to the absorptive area can be compensated for further down the gut by the large intestine. Conversely those coccidia affecting the large intestine get no compensatory effect, and since the rate of cell turnover in the large intestinal wall is much less than in the small intestine the clinical signs are more severe.

Oocysts are passed in the faeces, and under suitable environmental conditions, cool wet weather especially, they become infective within days, and are then ingested. Dry conditions and high temperatures will destroy the organism in the environment within a few days, but it is reported under favourable conditions they can survive up to two years. Clinical signs appear three to four weeks following ingestion of coccidia.

Clinical signs include loss of appetite, illthrift, weight loss, diarrhoea, dysentery, straining, anaemia and dehydration. The rear end, tail and hocks are commonly stained with faeces. Straining is a characteristic and may be accompanied by rectal prolapse. Undisturbed faecal puddles often have a dull metallic sheen to them.

Most cattle are infected with coccidia in their lives and in most cases there is minimal damage, and no clinical signs are seen. Clinical disease occurs only if animals are exposed to heavy infection or if their resistance is lowered through stress, poor nutrition or severe concurrent disease.

The acute phase of infection lasts five to six days and recovery occurs after about a week. Severely affected calves may take weeks to recover during which weight gains and feed intake are reduced. A large percentage of infections may be subclinical, with no outward signs. The rate of clinical disease is usually low, in the order of 10%, although outbreaks with far greater percentages may occur. A chronic form also occurs where affected calves appear weak and listless with drooping ears and a rough coat, their faeces appear soft to liquid, this usually occurs in calves that are constantly being reinfected in a heavily contaminated environment.

Normally by the time the disease is diagnosed it has run its course and treatment is not warranted. Affected calves should be isolated and severe clinical signs treated. Move animals to uncontaminated areas and reduce stocking density, avoid faecal contamination of water sources and feed troughs, supply animals with good quality feed or supplements.

Medicated feed can be provided to prevent infection during periods of exposure or when the disease is likely to be a problem. Active immunity is usually established by six months of age. Withdrawal of medicated feed may be followed by development of clinical disease in some animals possibly because the medications suppress the development of immunity.