



**Parasite
Control**

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Coccidiosis in cattle in Northern Ireland

The parasites

Infection with *Coccidia* (Coccidiosis) is very common. It is caused by a family of parasites which are specific to each host species (e.g. poultry coccidia do not infect cattle and vice versa). In NI from April to September 2018, over 39% of bovine faecal samples tested at AFBI were positive for coccidial oocysts, and approximately 10% of these positive samples had moderate, high or very high levels of oocysts present.

Disease occurrence

In cattle, coccidiosis usually affects calves under 1 year old, with some cases occurring as early as 3 weeks after birth, but occasionally yearlings and adults are infected if they have not experienced infection in early life.

Environmental conditions have to be right for development of the oocysts to the infective stage. The presence of moisture is essential for this and the speed of development of the oocysts passed in the dung to become infective depends on temperature, but typically takes 2-4 days. Housing and fields can then remain contaminated for over a year. Disease occurs following a massive intake of oocysts from the environment. This may be associated with large numbers of animals sharing unhygienic yards, or where animals congregate at pasture around water troughs and feeders.

Clinical signs

The parasitic infection attacks the lining of the gut, producing severe blood-stained diarrhoea (dysentery) with straining, leading to dehydration, loss of condition and, in some cases, death. The time taken for the clinical signs to develop following ingestion of the parasite can be between 4 and 18 days depending on the species of coccidian parasite involved.

Infected animals can shed very large numbers of parasite oocysts in the dung. Animals that recover develop substantial immunity to the particular species of coccidian with which they were infected. Subsequent infections in these animals are usually sub-clinical, with low level intermittent shedding of oocysts. However, these sub-clinically infected animals may have reduced growth rates and can act as a reservoir of infection for younger naïve individuals.

Diagnosis

Diagnosis of coccidiosis is often based on management history and clinical signs. Where animals have died, it is advisable to have a post-mortem examination carried out, to reach a definitive diagnosis.

Faecal examination for oocysts is an important element of diagnosis and needs to be carried out by experienced parasitologists who can distinguish the species of parasite present and thus predict the likely ability of the organism to cause disease.

Control

Prevention of coccidiosis in cattle is based on good management practices:

- Avoid wet underfoot conditions in houses and at pasture.
- Houses should be cleaned and disinfected with a product that is effective against coccidian oocysts between batches of calves.
- Ensure troughs are raised from the ground.
- Move food troughs and water containers frequently to avoid local build-up of oocyst numbers.
- Keep bedding dry.
- Avoid stress, especially due to overcrowding.
- Minimise mixing of different ages of calves, as younger animals will be more susceptible.
- Ensure adequate colostrum feeding i.e. 3 litres of colostrum within 2 hours of life from the first milk after calving.

Treatment

Calves with severe scour will need supportive rehydration. Ill calves should be isolated, housed in a clean, warm and dry environment and given one or two extra feeds of an oral rehydration solution. Scouring calves should continue to be offered normal amounts of milk or milk replacer. Ensure the 'isolation pen' is cleaned and disinfected before it is used again.

There are no vaccines available for cattle, so immunity is acquired through natural exposure to infection. Your veterinary practitioner can advise on using anti-coccidial medication to prevent the development of clinical disease during the risk period.



Calf with clinical signs of coccidiosis: profuse blood-stained diarrhoea

Photograph courtesy of AFBI. Acknowledgements: Dr R Hanna, Mr C Mason