CRYPTOSPORIDIUM INFECTION IN CALVES

Cryptosporidium is a protozoal parasite that infects the intestinal tract of calves, causing diarrhoea, debilitation and some cases death. It can also infect other species as well as humans.

What are the symptoms?
Cryptosporidial infection causes a mild to moderate diarrhoea (often yellow, watery and contains some mucous), in calves between the age of 5-15 days. It is not responsive to the usual treatment for calf scours. The persistent diarrhoea results in marked loss of body weight and varying degrees of depression, dehydration and reduced feed intake. In most cases the diarrhoea is self limiting (6-10 days after the onset of diarrhoea), but death can occur in severe cases.

How is it diagnosed?
Cryptosporidial infection is diagnosed through faecal analysis. A faecal sample will demonstrate the presence of the disease, as well as any other bacteria and viruses that commonly occur at the same time.

How is it spread?
Calves become infected after ingesting oocysts (cryptosporidium eggs) that are shed in faeces from another infected animal. These oocysts can be spread directly from calf to calf, indirectly via shared feeding apparatus etc or human contact, or by a contaminated environment or water source. The ingestion of only a small number of oocysts will cause infection, and they rapidly multiply within the calf, so that large numbers are then passed into the environment. Oocysts are very resistant to most disinfectants and survive for several months in an environment if conditions are moist and cool. Survival in the environment is lessened in drier conditions.
How is it treated?

- Halocur (0.5g/L) 2ml/10kg once daily for 7 days. This must be given orally after feeding.
- Commence treatment within 24-48 hours of birth.
- Dosing needs to be accurate as overdose can produce GIT ulceration. Do not expose calves to a second period of treatment or treat calves over 21 days of age.
- WHP: Meat and offal = 13 days

Calves should be kept on milk to maintain energy intake and prevent weight loss. Dehydration should be treated with electrolytes (remembering not to give electrolytes within 2 hours of milk).

How can the problem be controlled?

Controlling cryptosporidium is difficult because often the source of the outbreak is unknown and there is also a large amount of environmental contamination. Control is based on minimizing environmental contamination and spread between calves.

The following are recommendations for control during an outbreak:

- Ensure all calves receive adequate colostral transfer
- If possible raise calves separately for the first 2 weeks of their life, with no calf-calf contact and strict hygiene at feeding.
- If using calf rearing pens/houses and calf separation is not possible, then use an all in/all out management system in between batches of calves all areas should be cleaned with 5% ammonia, with a contact time of 18 hours and then thoroughly rinsed.
- Isolate affected animals and medicate all calves with Halocur for first 7 days (this is not a treatment for cryptosporidium, but greatly reduces the number of oocysts shed, reducing environmental build up and spread of the disease).