

Dairyhealth BYTES

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Coronavirus

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Aetiology

On the basis of serology, the bovine coronavirus responsible for calf diarrhoea is quite common. A closely related coronavirus has been found in feed lot cattle with digestive and respiratory disease and winter dysentery in adult animals has also been associated with coronavirus.

Coronavirus is not as common as rotavirus as a cause of calf diarrhoea. It is found in outbreaks in calves, especially mixed infections. Typically, the onset of coronavirus scouring in calves is at 7-12 days of age, but can be as late as three weeks. Infection is characterised by a severe enterocolitis typified by destruction of the villi. Maldigestion, malabsorption and inflammation all play their parts in this disease. This disease can be very severe and can have mortalities of greater than 50%, especially when the infection is in combination with other enteric pathogens.

Clinical signs

Typical clinical signs include acute scouring, dehydration, reduced appetite, weak suckle reflex and depression and weakness. Colonic involvement means that mucus is often found in the faeces of ill calves.

Diagnosis

The best way to diagnose coronavirus scour is by the examination of faeces using electron microscopy, ELISA or PCR. Examination of gut tissues by fluorescent antibody testing is also an option. The cytolitic nature of coronavirus means that the virus can disappear quite quickly so chronically infected calves are not good cases for sampling for testing.

Treatment

Treatment options are similar to those covered previously for ETEC and rotavirus infections. On occasions, antibiotic treatment for secondary bacterial infections are considered.

Control

Control starts with the management factors that predispose calves to infection. Coronaviruses die off in the environment quicker and are more susceptible to disinfectants than rotaviruses.

Dry cows can be vaccinated six and three weeks before calving with a killed rotavirus/coronavirus vaccine and boosted annually thereafter.