International Dairy Topics

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Clostridial enterotoxaemia II

Diagnosis

Other than the physical clinical signs there are few clues to assist in the diagnosis of this condition. Fatalities can be subjected to a post mortem examination, but although various authorities cite certain lesions found at post mortem as being diagnostic, they seldom are.

Unfortunately, all dead animals have some Clostridium perfringens in their intestinal tracts so relative numbers and toxin types need to be assessed for diagnostic purposes. However, it should be noted that intestinal enzymes tend to break down α- and β-toxins within a few hours of death.

This means diagnosis is going to rely strongly on clinical signs and elimination of other causes.

Treatment

Supportive therapy focuses on intravenous fluid administration with appropriate electrolytes and glucose to rehydrate the calf. Ideally, sodium or potassium penicillin should be given intravenously every six hours for up to a couple of days and then replaced by intramuscular procaine penicillin.

Resolution of clinical signs is slow and calves have varying appetites depending on their degree of abdominal distension and dehydration. In a few calves progressive intestinal ulcerations have been seen, as has a failure of abomasal emptying.

Control and prevention

The presentation of excessive quantities of starch, sugar or soluble protein in the stomach and/or intestines is seen as a key factor in the development of enterotoxaemia and this must be seriously considered when creating any prevention plan.

Evaluation of ration net energy, fibre content and length, bunk size, within pen animal hierarchy, feeding frequency and rate, magnitude in feeding changes and feed mixing practices are worthy of consideration when looking to correct conditions associated with carbohydrate overload.

Prevention of calf enterotoxaemia requires consideration of environmental and management issues that could trigger the intake of abnormally large quantities of milk or milk replacer.

Some success has been achieved by reducing the volume and increasing the intake of milk. For pasture fed stock the move to new pasture should be slow and managed.

Vaccination can be successful on farms with an ongoing enterotoxaemia problem. All dry cows and heifers should be vaccinated twice, 2-4 weeks apart.

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