

Focus on Dairy

SALMONELLA INFECTION IN DAIRY CATTLE

Following a number of recent salmonella outbreaks, it's timely to review salmonellosis.

Salmonella infection in dairy cattle can cause severe illness and disease in dairy herds especially around calving time and in the early lactation period.

What causes Salmonellosis? Salmonella is a gram-negative intestinal bacterial infection, there are many serovars that affect cattle but Salmonella Typhimurium and Salmonella Bovis –morbificans are the most common.

What are the clinical signs? Salmonellosis in adult cattle usually presents with acute diarrhea. Affected cattle are usually dull, depressed and have an elevated temperature. They will have a sudden drop in milk production and a loss of appetite and usually develop profuse, watery and foul smelling diarrhea. Cattle become quickly dehydrated and lose weight rapidly and without early treatment mortality rates can be high. Some strains of Salmonella (e.g.Brandenburg) can cause abortions in cows and ewes. Calves can also become infected and develop septicemia, diarrhea and joint ill or may even be found dead without any obvious clinical signs.

How do cattle get salmonella? Salmonella is usually spread via the fecal-oral route either by direct contact, or indirect contact via contaminated feed or water, effluent irrigated paddocks, or through vectors such as birds and rodents. Some animals can be carriers of salmonella but they don't normally show signs of disease, except when stressed or sick when they can shed large numbers of bacteria in their faeces. The bacteria can survive long

periods in the environment with reports of up to 28 weeks in effluent ponds. Milk can also become contaminated with salmonella, either by clinically infected or carrier animals.

What treatments are available? Early treatment with broad-spectrum antibiotics, non-steroidal anti-inflammatories and fluid therapy where appropriate.

How to diagnose? Faecal culture of affected animals.

What can you do to prevention Salmonellosis? Avoid purchasing adult animals as replacements you may introduce Salmonella into your herd via "carrier cows", however these are difficult to identify and maintaining a closed herd is a better policy.

Vaccination is effective in preventing disease, it is also useful in an outbreak situation to help reduced deaths and abortions. Vaccination should be considered when you have an outbreak of salmonellosis or had significant history of Salmonellosis in the herd. There is a salmonella vaccine registered for use in cattle in New Zealand, Salvexin+B (MSD, Animal Health) which contains S. Bovismorbificans, S. Hindmarsh, S. Typhimurium and S. Brandenburg antigens. Cows should be vaccinated twice, 3-4 weeks apart and then a yearly booster. Colostrum from vaccinated cows should be fed to calves for at least 5 days following birth. An appropriate strategic vaccination programme can help prevent or at least reduce the number of losses and clinical cases. Discuss a vaccination programme with your veterinarian.

Other control measures include separating clinically affected animals so to reduce

environmental contamination. Effluent should be stored in ponds for approximately a month and spread over pasture, ideally such pastures should be cropped or at least rested for at least 4-5 weeks following application. Rodent and bird control is important especially around grain silos, storage bunkers and in-shed feeding systems. Preventing access of cattle into feeding bins on feed pads so to prevent faecal contamination of feed.

Can people contract salmonellosis? Yes. Salmonellosis can cause serious illness in people. Infection occurs by direct or indirect contact with cows and calves, consumption of raw milk, consumption of contaminated food, drinking contaminated water or contact with untreated water. Clinical signs in people include vomiting, diarrhea, severe stomach cramps, fever and dehydration lasting 4-7 days. Consult your doctor for medical advice and support.

NEIL MACPHERSON | TE AWAMUTU

WE WANT YOU!

Are you keen to be at the forefront of new research?
Are you or your staff eager to learn new skills and information?
EpiVets need you for upcoming trial projects. Register your interest today!

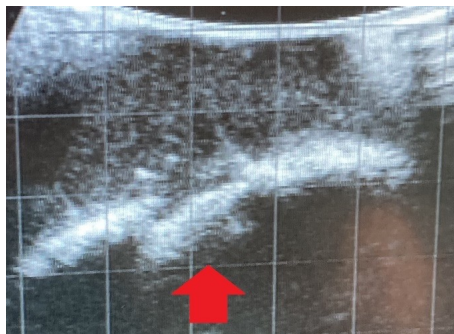
Email Emma for more details
emma@epivets.co.nz



BONE SEQUESTRUMS

A bone sequestrum is a portion of dead bone which generally occurs due to direct trauma to bone. Bone sequestrums are not very common and can be seen 2-3 weeks after injury.

How they do they occur? Direct trauma damages cortical bone (outer layer of bone) which causes bone death due to loss of blood supply and bacterial infection.



What does it look like? The animal may show mild to moderate lameness. They are often non-healing wounds which can respond to antibiotics but recur once the antibiotic course ends. We often see pus coming from a small drain hole on the leg wound.

How is it diagnosed? History of trauma, draining tracts and non-healing wounds. We can also ultrasound or radiograph the leg to identify damaged bone.

- Radiograph: Abnormal bone circled.
- Ultrasound: Normal, smooth bone (white curve) is displayed on the left. Sequestrum is displayed on the right where the bone is interrupted (red arrow).

How do we treat this? Surgery is required to remove the damaged portion of bone. Without surgery, the dead bone acts as foreign material causing a persistent source of irritation and infection.

MORGAN MADSEN | TE AWAMUTU



Shopping for Metabolics?

Check out our great ALL OF SPRING Specials, with **free** Delivery on Farm!

Glucaphos	Glucamax	Glucalmag	Calpro 375
\$28.20	\$26.05	\$24.30	\$26.20

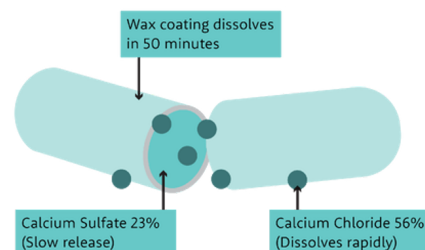
Calpro – The Superior Calcium Bolus



Immediately after calving, cows experience high levels of calcium loss through milk and colostrum. At this time of peak demand for calcium, Calpro Bolus prevents and treats subclinical hypocalcaemia and is also an aid in the prevention and treatment of clinical hypocalcaemia (Milk Fever).

Calpro Bolus delivers two essential types of calcium: chloride and sulphate. These two calcium ingredients have been proven to help get cows back to optimum performing levels.

Calcium chloride is rapidly absorbed, and the calcium sulphate is absorbed over a longer period.



Calpro Bolus has been backed by peer-reviewed research in New Zealand. It is vet only and the only MPI authorised intra-ruminal calcium bolus in New Zealand.

Contact Grant for bulk or forward orders.

GRANT HODGSON | 027 536 2042
FIELD REPRESENTATIVE