Could Salmonella be a threat to your herd ??

Kim Brister

Salmonella is a bacteria that can cause diarrhoea, fever, loss of production and sometimes death mostly in calves, but also in adult cattle. While these bacteria can exist harmlessly in the digestive tract of an animal (up to 30% of herds will be shedding salmonella in their manure), high population levels, certain strains and stress in the animal can cause severe illness. Salmonella infections in a herd can severely impact farm profitability. The cost of lost milk production, medical treatments, vet bills and the extra labour required to deal with sick animals makes it a costly experience. There is also the potential risk that the people dealing with the sick animals could possibly transmit the illness to other humans.

Symptoms of Salmonella :
Fever, dullness, decreased appetite
Reduced milk production
Watery manure, with strong odour (often containing blood clots)
Elevated temperature and heart rate
Dehydration (little urine)

Common Sources of Infection:
Feed Troughs - bird manure
Dams & troughs inhabited by water birds (eg. ibis & ducks)
Cows drinking from puddles & drains

The risk of Salmonella infection can be increased when the cow's immune system is compromised:

Calving
Deprivation of Water or Feed
Inconsistent Diet / Slug Feeding
Transportation
Crowding

Control and Prevention
In infected herds, infected animals must be separated and isolated away from the rest of the herd. Calving time is the peak risk of infection and extra care needs to be taken during this period. Also ensure that milk from sick cows (or cows that have been in contact with such cows) is not fed to calves. Milk is a very good source of bacteria and disease transfer is very common in calves fed infected milk. Good husbandry and hygiene is essential if control is to be achieved. Herd vaccination can be carried out, to prevent infection, however this option will only cover a limited number of strains and must be carried out annually.

On-farm experience

Salmonella in your dairy herd is not a pleasant experience, just ask Jacqui Morrison and Aubrey Pellett, customers of Reid Stockfeeds, Trafalgar. In November 2007, Jacqui and Aubrey's herd dramatically dropped more than 28% in milk, this was more than 7L/cow/day in a 10 day period. Of the 440 milkers, 50 were showing clinical signs of salmonella, requiring immediate treatment . Of these 50 cows, 10 had faecal and blood samples taken and Salmonella was tested to confirm the bacteria's presence.

Over this period, Jacqui and Aubrey were in the process of converting their split calving herd into an annual calving herd, on their lease property at Hill End, Gippsland. Some of the cows affected by salmonella only calved in the spring 07 and would not be dried off until early 2009, it could not have happened at a worse time for the couple. The cause of Salmonella was unknown. The herd seemed healthy and was not compromised in any way. But Jacqui and Aubrey have made conscious efforts to reduce the potential risk of any salmonella infection again.

Since the initial outbreak in 2007, Jacqui and Aubrey have purchased the lease property. Firstly, the plan was to ensure troughs were available for cows in paddocks rather than dams. They are also in the process of fencing off waterways ie: creeks and large dams, to reduce the risk of Salmonella even further.

During the treatment of Salmonella they found Bio-mos to be the most effective. After the addition of Bio-mos the number of new infections was greatly reduced. Jacqui and Aubrey are now well aware of what a typical salmonella case looks like. Bio-mos is now used strategically in their herd as a preventative.

CALVES & LEAD FEED COWS

Transition cows can often pick up a salmonella infection from their calving paddock and pass it onto her calf. Often a young calf will have difficulty fighting this infection when their immune system is still developing. Feeding a preventative such as Bio MOS to these groups of animals can reduce mortality rates caused by *e.coli* and salmonella infections in your calf shed.

WHAT IS SALMONELLA ?

Salmonella is a bacteria, small and rod shape with a tail or 'flagella' for movement. They prefer to live in an anaerobic environment, they get their energy from oxidation reactions. The bacteria can be transferred from live animal/person or from food consumed. Salmonella can survive for weeks outside the body, particularly when protected in manure or water, where they can survive for months. Birds and water reptiles are the major carriers of the disease, as well as in fly excrement, causing spread.

On food, the bacteria is not destroyed by freezing and can only be killed by cooking for periods longer than ten minutes at temperatures over 75 degrees C. Once infected, symptoms usually present within 12-72 hours and can last for up to one week. Salmonella bacteria live in the intestine of animals and humans, many strains harmlessly, however some strains will cause infection at the intestine wall and the symptoms listed above.

If you would like any further information, contact your technical services representative.