

DAIRY TALK

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VET CARE
24/7



Season's greetings

DECEMBER 2014 - JANUARY 2015 NEWSLETTER

Johne's Disease In New Zealand Dairy Herds

What is Johne's disease?

Johne's disease is caused by *Mycobacterium avium* subspecies *paratuberculosis*, or MAP for short. MAP is a gastrointestinal bacteria which can cause thickening of the intestinal wall. The affected animal then struggles to absorb nutrients and suffers from chronic weight loss, decreased milk production and/or diarrhoea.

How do animals become infected with Johne's disease?

Animals are infected as calves and replacement heifers (up to 18 months of age), but clinical disease generally doesn't occur until infected cattle are 3 years of age or older. However, there have been reported cases of clinical Johne's disease in heifers 15-18 months of age. In other words, the disease is latent for months to years, with the bacteria lying dormant before clinical signs are observed. However, only a small proportion of infected cattle will go on to develop clinical signs, with the majority being culled for another reason unrelated to their infection status.

MAP infection can be difficult to diagnose and, although it is possible to prevent on-going clinical disease, it is impossible to completely eradicate the bacteria off a property. One of the reasons the bacteria is so difficult to eradicate is that it can remain viable in the right environmental conditions (moist and shaded) for months. There is also no treatment for Johne's disease and clinically affected cattle shed massive amounts of the bacteria into the environment, acting as a major source of infection for young stock.

How does Johne's disease spread?

There are many routes of MAP transmission, with faecal-oral being the most important. Faecal-oral transmission happens when calves or heifers pick up MAP from faeces on the pasture, faeces in the water or from suckling dirty udders. MAP is also found in the colostrum and milk of infected cows which can then spread to milk-fed calves. It is also possible for MAP to spread across the placenta of an infected cow to the unborn foetus. Other ruminants, such as adult beef cattle, goats and deer, and some wildlife vectors can also act as a source of MAP.

Whether or not a young animal becomes infected with MAP and goes on to develop clinical Johne's disease depends on the age of the calf when exposed (i.e. calves less than 30 days old are most susceptible), breed (e.g. Jerseys are more susceptible to developing clinical disease than Friesians), genetics, stress and the level of exposure. It is possible also to trace familial lines that are more susceptible to developing clinical disease.

How do we diagnose Johne's disease in the herd?

Individual cows with clinical signs of Johne's disease may be blood sampled. The blood test for MAP is not 100% reliable, but if a positive result is found then this result can usually be trusted. Because MAP infection can be difficult to diagnose, a cow that tests negative may sometimes still actually be infected. Cows may also be faecal sampled to confirm disease, but the turn-around time for this test (6-8 weeks) means that a blood sample is often more practical. Unfortunately the nature of the disease means that we cannot diagnose all cases of MAP infection, but these are the best tests we have available and we have to work within the constraints of their accuracy.

LIC has recently launched a milk test which can identify a proportion of cows within a milking herd with subclinical Johne's disease (i.e. infected with MAP but not yet showing clinical signs of disease). The milk is collected at herd testing time and results are returned reasonably promptly (within 2 weeks). Cows with clinical disease are a major source of



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MAP to the calves and identifying subclinical cows allows you to manage these animals before they go clinical. It is recommended that you talk to your vet about the potential usefulness of this test for your herd.

How can we manage Johne's disease in New Zealand?

Five key Objectives have been developed by the dairy industry to try to control the spread and economic cost of Johne's disease in the national dairy herd:

1. To eliminate a major source of MAP before calving and reduce losses due to clinical Johne's disease
2. To minimise calf exposure to MAP before birth and at calving via dam's faeces and colostrum
3. To avoid calf contact with adults and prevent exposure to MAP contaminated environments
4. To prevent heifer contact with cows, their faeces or effluent until they join the herd
5. To avoid importing MAP into the herd from "high risk" sources

Because MAP cannot be eliminated from your farm, the focus of Johne's management is to minimize transmission of the bacteria to the calves and rising 2 year old heifers. A successful Johne's disease control program can be developed specifically for your herd management structure by one of our trained veterinarians and may include:

- Culling of cows infected with clinical Johne's and management of subclinically infected cows
- Maintaining a clean calving area
- Feeding colostrum and milk from 'low risk' cows
- Preventing exposure of pre-weaned calves to effluent in the rearing facility
- Preventing exposure of weaned calves and heifers to effluent-sprayed paddocks
- Minimizing prior/co-grazing of weaned calves and heifers with adult ruminant stock

If you need help with managing Johne's disease on your farm, talk to your local Anexa vet. Our well informed team pride themselves on keeping abreast of the latest Johne's recommendations and will be happy to help you to produce a plan to control Johne's disease in your herd.

Facial Eczema

Facial eczema season is almost upon us again! We recommend supplementation with Zinc from January to May. People tend to be caught with outbreaks of clinical disease at the beginning of the season, when they have not organised Zinc yet or, at the end of the season, when they think it is safe to stop supplementation and it is not. Don't get caught in this trap!

Facial eczema spores favour warm and wet conditions. There may be certain 'hotspot' paddocks on your farm and some farms are more susceptible to high levels of fungal spores than others. Ingestion of the spores leads to liver damage, subsequent photosensitisation and often horrific skin lesions. Unfortunately, it is impossible to relate the degree of skin damage to the amount of liver damage. However, it is safe to say that if you have visible clinical disease in the form of skin lesions in some animals, a significant proportion of the herd will be suffering from liver damage.

Spore counting on your farm may help you to manage the disease. A pasture sample stored in a paper bag and brought into one of our clinics can be examined for fungal spores.

While some people will choose to use fungicide sprays to help prevent the disease, most will use Zinc supplementation which will afford some protection against development of clinical signs. Remember that in situations of heavy challenge, Zinc cannot be fully protective.

Zinc may be drenched, added to the water or administered in the form of bullets. Often young stock are given Zinc bullets as generally you cannot predict the amount of water they will drink on an average day.

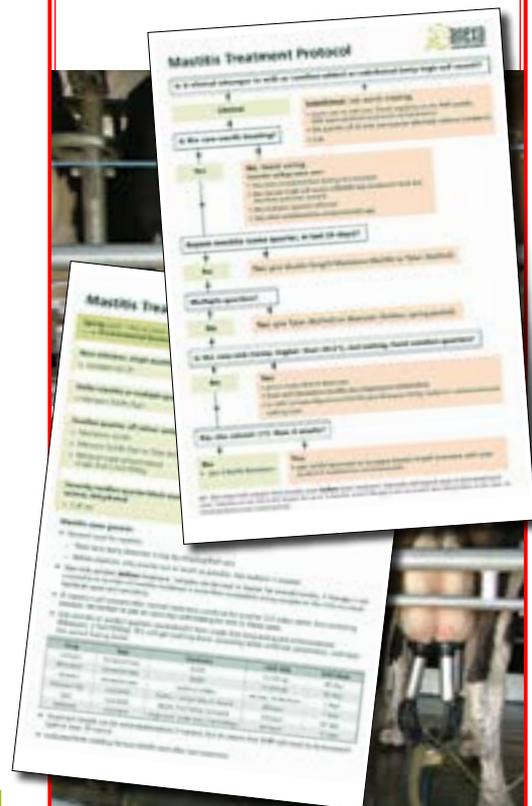
Plan to recheck Copper levels in your stock towards the end of the Zinc season as they may be low - this will allow you to begin supplementation early if it is necessary.

CHRISTMAS HOLIDAYS- what can you do to make sure everything runs smoothly?

Over the holiday period it is important to put policies in place so that everything runs smoothly on the farm. Relief milkers should be left instructions on the operation of the milking plant, particularly if they have not milked on your farm before.

Have a chat to your vet about what we can do to help (e.g. mastitis treatment plans can be developed). Mastitis treatment choices will vary depending on whether the cow is old or young, one or multiple quarters are affected and whether the animal has had clinical mastitis before. Rather than keeping this decision-making process in your head, it pays to document it, especially for relief staff.

Standard operating procedures (SOPs) are useful for all areas of your farm's management. SOPs allow all staff members to discuss your farm goals and procedures and are invaluable in the long-term.



Weirburn Farm Case Study

Weirburn has had a great start to mating, with 93% of the herd submitted in 3 weeks (target was above 90%).

After 6 weeks of mating the non-return rate on the Fertility Focus Report was 72% (target was above 65%).

The heifer mob has held body condition since the October visit (4.5 average) and the mature cow mob has just started gaining condition, now also a 4.5 average (up 0.1 from the October visit). This is not an unusual pattern, specifically that the young cows do not seem to start gaining condition until later in the season, whereas the mature cows will more often follow the expected trend of gaining condition during mating (after peak production). This season, condition scoring this herd monthly was implemented in order to understand why we didn't hit empty rate targets (after 9 weeks) despite hitting 6 week InCalf rate. So far we have learned that the cows take longer to turn the corner (i.e. longer to start gaining weight post-calving) than was expected, as they have been fully fed for the production they have been doing (remember this herd peaked at 2.4 and held above 2.2 for a long time).

Although the herd was still doing 2kgMS in mid-November, production has dropped 20% since a peak in mid-September.

As intended, the protein % is climbing, which indicates that the cows are gaining condition, as confirmed by the condition scores.

Develop A Young Stock Plan For Your Replacement Stock

Our young stock management plans are personalized for your farm. They are developed in an easy to read calendar format, which is laminated for both you and your grazier. The plans take 30 minutes to draw up, ensuring you both know what should be happening and when.

Based on the expected mature live weight of your herd, we can set critical times for weighing your young stock to evaluate whether they are reaching their target weights. This can be scheduled with other procedures such as drenching, vaccinations or mineral supplementation.

Young stock management plans discuss the right vaccinations for your heifers, giving you peace of mind that your calves are fully protected and that vaccinations are administered within the correct time frame, saving you money and time.

Young stock are particularly susceptible to intestinal disease and this can be a common reason for ill-thrift. The young stock program incorporates a drench plan, with coordinated regular drenching using the right products to ensure your calves won't suffer growth checks associated with parasitism.

Every farm is different, with respect to mineral levels in the soil and pasture. A common problem, when heifers are out grazing on poorer country, is that there is no system in place to monitor their trace element status. A plan around trace element supplementation will help you to decide which supplements are needed and when.

Young stock plans also encompass other animal health issues, including BVD testing and Zinc supplementation to prevent facial eczema. We can also provide valuable information about nutritional supplementation options at grazing to ensure young stock are reaching their target weights.

Let us sit down with you for 30 minutes to create a personalized plan for your heifers, to maximize the future production of your herd.



Body Condition Scoring In Mid-Lactation

While the two key time frames for body condition scoring to predict reproductive performance are pre-calving and pre-mating; it is still crucial to monitor body condition score in mid lactation, particularly in high-producing herds where cows may be 'milking off their backs'.

When to body condition score your herd:

1. Before the Planned Start of Calving
2. Two weeks before the Planned Start of Mating
3. After the end of mating (before the summer dry)
4. In late lactation (3-4 months before the Planned Start of Calving date)

In order to collect body condition information, it is necessary to walk diagonally through a mob of cows and condition score a minimum of 70 animals. This will mean your results are statistically significant and that it won't matter if you score the same animal twice. Remember that if you have more than one mob, you will have to score 70 animals from each of the mobs.

It is best to revise the DairyNZ body condition scoring booklet each time you score your herd to calibrate yourself, no matter how experienced you are with condition scoring. Many of our Anexa vets are DairyNZ body condition score accredited and can condition your herd for you if you prefer.

Documenting average herd condition score at key times during the season will allow you to refer back to this information should there be any question around cow health or performance later.



Order your summer drench and receive a Christmas ham



STAFF NEWS

PhD Completed

After 3 years of study, Melvin de Boer successfully defended his PhD study on uterine diseases in dairy cattle on Friday the 3rd of October.

Melvin's studies included demonstrating relationships between specific bacteria in the uterus soon after calving and an increased risk of endometritis and hence poorer reproductive performance. Melvin also found a virus new to New Zealand that is potentially associated with uterine disease. The sensitivity of some common uterine bacteria to a range of antibiotics was investigated and some potentially new approaches to treatment of bacterial uterine diseases were identified. Two papers from Melvin's PhD have been published in peer-reviewed journals and 2 further papers have been submitted for publication. Melvin's thesis was recently added to the "Dean's List of Exceptional theses" recognising that it is of exceptional quality based on research and analytical content, originality, quality of expression and accuracy of presentation. This is an outstanding honour, with Melvin's thesis considered amongst the best in the field.

Melvin departed for the Northern hemisphere at the end of November. We wish Melvin all the best with his future endeavours.

Scott McDougall BVSc, PhD, Cognosco, Anexa Animal Health

Farewell to long standing Gordonton Receptionist

After almost 30 years of loyally serving the Gordonton farmers, we wish Jenny Smith well in her retirement this month. "How lucky I am to have had a job that makes saying goodbye so hard - thank you to all our farmers, it's been a pleasure working with you."

Christmas Hours

All Clinics will be closed on the Christmas and New Year public holidays.

- Thursday 25th December – Friday 26th December
- Thursday 1st January – Friday 2nd January

Anexa Morrinsville will also be closed on Saturday 27th December and Saturday 3rd January.

Our afterhours service is available during this time.



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Te Kauwhata
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