

Johne's Disease: What testing tells us

Source: Emily McDonald, Industry Development Coordinator

Special acknowledgement for this article to Dr. Ann Godkin, a veterinary scientist with the Ontario Ministry of Agriculture, Food and Rural Affairs and chairs the Ontario Johne's Industry Working Group.

Testing ranks high among the key components you need to implement an effective Johne's Disease control program on your dairy operation. To use testing properly, however, you need to understand results and how to make management decisions based on them. Both the Alberta Johne's Disease Initiative (AJDI) and the Ontario Johne's control program use testing to identify whether or not you have the MAP bacteria, the bacteria that causes Johne's Disease, present on your farm. The AJDI uses a fecal culture test. It detects growth of MAP in the manure sample, if present. Ontario's program uses the milk ELISA offered by CanWest DHI. It detects antibodies to MAP in a cow's test-day milk samples.

To show how the two tests can relate to each other and how the MAP infection stage can affect results, Ann Godkin and her colleagues at the Ontario Ministry of Agriculture Food and Rural Affairs, tested four cows multiple times on both the milk ELISA and fecal culture tests. They picked four healthy-looking cows from a herd they knew had Johne's Disease, based on the herd's test results. They collected one milk sample and one manure sample from each cow every other day for 10 days. The daily manure sample was split and cultured three times. The daily milk sample was tested once at CanWest DHI. Although four cows make up a small sample size, their results clearly indicate what can happen with Johne's testing.

Cows 1 and 2 were negative on all the milk ELISA and fecal culture tests done over the 10 days. These results don't prove the cows are not infected with MAP, but they were not producing many antibodies and not shedding MAP during the testing period. The fecal and milk tests agreed at the time of our testing.

Cow 3 had positive results on all five days of milk ELISA testing and positive fecal cultures on four of the five days. Even though she was a MAP-shedding cow, she still had one day when her fecal culture was negative. If this had been the only day she had been tested, her manure culture would not have agreed with her milk test done the same day. Nevertheless, results from the two tests agreed four out of five days.

Cow 4 had a very low antibody level on the milk ELISA one day but was negative the next four days. Fecal culture results were negative on two days, positive on another day and positive on only one of three cultures on the remaining two days.

This inconsistency occurred because she was shedding lower amounts of MAP bacteria in her manure. On two of the five test days this cow had results from the two tests that agreed. On the other three days, results conflicted. Results on these four cows also show neither test proved better than the other. Fecal culture missed Cow 3 on one day compared with milk ELISA; milk ELISA missed Cow 4 on one day compared with fecal culture.

While regular testing provides highly valuable information, it's not the only program component you need to make good Johne's Disease prevention decisions. You still need to do the risk assessment and management plan with your vet to ensure all information relevant to your farm's Johne's risk is gathered at one time.



for sale

40 Bio-milker claws with many new parts.
Phone 780-619-4427.

2008 Delaval 4000 gal. Milktank, plus compressor and complete Dari Tek double 8 parallel parlor; vertical lift rapid exit, take offs, meters, vac pump, etc.
Phone 403-740-5488.

services cont'd

Bricon Safety Grooving Ltd.

Concrete grooving, planing/scarifying. Providing traction for a safer, more productive environment.

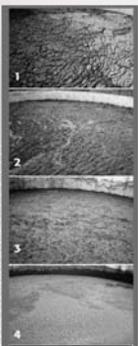
Phone 1-800-590-4403 or cell: 204-981-5057.

Custom Heifer Raising, strict health and feeding programs. **Phone Hank Overeem 403-783-1270.**

Business plan preparation for New Entrants and others, succession plans, farm financial analysis and goal setting, negotiations with lenders, low-cost term life insurance AJL Consulting, Art Lange P.Ag, CAFA, 8 years experience. **Phone 780-467-6040, email: art@ajlconsulting.ca website:ajlconsulting.ca.**

Chinook Hoof Care Ltd. Two trimmers, two chutes. 13 years exp., Dutch trimming method. Serving central and southern Alberta.
Phone 403-795-9596.





The ideal slurry and liquid manure treatment

penergetic^g

- ◆ Retains available nitrogen - converts ammonia to (stable) ammonium
- ◆ Eliminates crust and sludge ◆ Reduces pit/lagoon agitation time

European technology • Effective • Economical • Easy to Use

Illustrations 1 - 4 show the homogenizing effect of penergetic g on liquid manure.

For info & references: PENERGETIC CANADA
780-216-0184 // 1-888-737-0907 info@penergetic.ca www.penergetic.ca