

What you Need to Know about Testing for Johne's Disease

Source: Steve Mason, Robert Wolf, Herman Barkema

Because Johne's disease (JD) develops very slowly and the causative bacteria (MAP) 'hide' inside immune cells, it is difficult to detect JD infection by testing milk, blood or feces. For example, the milk ELISA test used by Canwest DHI has only about a 20 per cent probability of giving a positive result for a cow that is in the early stages of infection. This means that, if you test milk from five early-stage cows, on average, only one will be positive. The probability that an infected animal will have positive milk ELISA test (this is called sensitivity) increases to 60-80 per cent as cows show symptoms of JD. At this point, the magnitude of the test will also likely be higher (i.e., a 'high titre').

Considering the low sensitivity of the milk ELISA test, you cannot conclude that a cow is uninfected based on one negative result. However, the probability that a cow is uninfected increases slightly with each subsequent negative test.

If a single ELISA test result is positive, it is very likely that the cow is infected. This is because the probability that an uninfected cow will yield a positive test is around two per cent. The probability that a 'high titre' cow is infected is closer to 100 per cent. This is the reason that the Ontario JD control program recommends culling high titre cows. The same reasoning that applies to the individual milk ELISA test is also true for serum ELISA and fecal culture, although both the sensitivity and specificity of fecal culture are much higher. Because of the uncertainty inherent in interpreting the results of these tests, strategies relying only on testing and culling individual animals are not effective.

In the Alberta Johne's Disease Initiative, we focus on risk assessment followed by modifying management practices to reduce the risk of spreading JD within the herd. We also test manure samples from the cows' environment (environmental testing - ET) to evaluate the probability that the herd is infected, recognizing that ET has the same limitations as individual serum, milk and fecal tests. Testing of a single environmental sample has a 20 – 60 per cent

probability of detecting an infected herd, depending on the proportion of cows in the herd that are infected (within-herd prevalence). Multiple negative tests increase the probability that the herd is uninfected, but a single positive test indicates that the herd is infected.



2014 New Entrant Assistance Program

Source: Forrest Evans, Policy Analyst

For the past three years, Alberta Milk has administered the New Entrant Assistance Program, loaning a small amount of Alberta's dairy production quota to successful applicants to assist them in establishing a viable new dairy farm. The goal of Alberta Milk's New Entrant Assistance Program is to assist passionate, knowledgeable individuals and families who want to start a dairy farm by alleviating some the start-up costs of dairy farming.

In 2013, we received four completed applications that were forwarded to the selection committee for consideration. From these applicants, we welcomed three successful New Entrants into the dairy industry in Alberta: Willem Jansen, Bert Grisnich, and Dustin Grisnich. To date, this program has been very successful, as we have accepted 12 applicants in the past three years, 11 of whom are currently in production.

The guidelines for the 2014 New Entrant Assistance Program will be posted to the Alberta Milk website by January 31, 2013. These guidelines may be slightly different than they have been in previous years, but the 2013 guidelines will remain on the website for reference until the 2014 guidelines are published. As in previous years, the criteria considers a need for assistance, the likelihood that the applicant will be a successful, and long term participation in the dairy industry.

If you plan to apply for the New Entrant Assistance Program, please contact Forrest Evans at 780-577-3313 to ensure your application will meet the minimum required criteria. Applications for the 2014 New Entrant Assistance Program will be accepted between February 1, 2014 and April 30, 2014.

