



Decreasing your risk of buying Johne's disease when buying breeding cattle

Situation:

You buy a show heifer at the Expo. Because you are aware of Johne's disease you test her using both the ELISA and fecal culture tests before you add her to your herd. She tests negative on both tests. You show her and she does well, people are interested in buying her offspring or flushing her. After her first calf she gets really thin and develops terrible diarrhea. You test her for Johne's disease again and she is a strong positive. How can this be? What could you have done differently?

Johne's disease is easier to prevent than to get rid of. When purchasing cattle, it is much more important to look for test-negative HERDS, rather than to trust the test results on individual animals. Testing for Johne's disease is not a "yes she has it, no she doesn't" kind of situation. Repeated testing decreases the likelihood (probability) that the animal or herd is not infected. Repeated testing decreases your risk of buying infected cattle.

If you do not have Johne's disease in your herd, prevent infection from entering by buying ONLY low risk cattle. Close the herd to animals of unknown Johne's infection status and get your replacements from herds that are low-risk; that is, test-negative for Johne's disease at least once and preferably more times.

What kind of tests are available to test for Johne's disease? How accurate are they?

The most reliable test for detecting the bacteria that causes Johne's disease is a culture to grow bacteria from a manure sample. If the bacteria grows, the test is positive and the cow has Johne's disease. However, if the bacteria don't grow in culture, the test is considered negative. This does not mean the cow does not have Johne's disease – it means that she is not shedding the Johne's bacteria at the time of testing. *Mycobacterium paratuberculosis* take up to 16 weeks to grow. Because the bacteria grows so slowly, this is not a very handy screening test, but it is the definitive test for the bacteria.

There is also a blood test, called an ELISA. The ELISA is more accurate as the animal ages, as the disease progresses, and in animals with diarrhea and weight loss. A negative test, particularly in a young animal, does not mean the animal doesn't have Johne's disease. A positive test means the animal could have Johne's disease and should be considered suspect. Work with your veterinarian to develop a plan – the decision to cull, retest, or culture should fit into your overall management plan.

Johne's disease is widespread in the dairy industry. How do I guarantee that purchased replacement heifers don't have Johne's disease?

The only way to absolutely, positively GUARANTEE that an animal you purchase does not have Johne's disease is to necropsy it! Since necropsy of new purchases is not a realistic option, you need to know what to do to DECREASE THE RISK of bringing Johne's to your farm. Buying replacements from herds that test annually as part of the national Johne's Herd Status Program provides the closest thing to a guarantee that purchased animals are not infected.

Why can't we just test for Johne's disease?

Johne's is different than most other diseases that infect cattle. First of all, Johne's is almost always introduced into herds by purchase of an infected animal. Second, calves are infected at a very young age, but do not show evidence of disease for years. Clinical signs of Johne's disease can be seen at one year of age, but that is unusual. And third, there is no good, quick, or reliable test available for individual animal testing that provides a high level of confidence that the animal you purchased does not have Johne's disease.

The Johne's disease status of the source herd provides the most information for estimating the infection status of an individual.

To decrease your risk of purchasing an animal with Johne's disease, buy your cattle from the following herds (in decreasing order of preference)

- EXCELLENT (LOW RISK) **Status Level Herds**
 - Status Level 4 herd
 - Status Level 3 herd
 - Status Level 2 herd
 - Status Level 1 herd
- GOOD
 - herd that has had a whole herd test
 - a herd that has had several whole herd tests and has a test and cull program and management program in place
 - a herd with tests on a representative number of animals
- BETTER THAN NOTHING
 - test on the dam of the purchased animal
 - test on the individual animal
- WORST (VERY HIGH RISK)
 - no tests whatsoever
 - the stockyards

So, if I purchase a yearling animal that had a “negative Johne’s Disease test” what does that mean?

It means the producer is aware of Johne’s disease, but that is about all it means. It does not mean the animal doesn’t have Johne’s disease.

How can that be? If the animal tests negative it should be negative, shouldn’t it?

Unfortunately, with this disease a single negative test on an individual young animal really tells you very little. Young cattle infected with *M. paratuberculosis*, but not showing evidence of disease, are not likely to test positive, no matter which test you use. This is called a “false negative”. The test isn’t very useful to identify early infections. If you have an animal with evidence of disease (weight loss, diarrhea) and you have a positive test, you can feel quite confident that the animal has Johne’s disease.

So what is a producer supposed to do?

Johne’s disease is a herd problem, so herd history and herd test status are really the only ways to have any idea about the likelihood that individual animals are not infected. The goal, in an ideal world, would be annual Johne’s disease testing of all adult animals in the herd and culling of any positive animals. You can actually decrease your risk of purchasing infected animals by buying from producers that test, even if they have a few positive animals, as long as they always promptly cull them.

The risk is virtually zero with a closed herd that is tested every year for seven years, and all cows have tested negative for seven years. However, if you buy from an open herd that purchases bulls and replacements from herds of unknown Johne’s disease status, uses cull dairy cows for recipients and never tests, the risk of purchasing Johne’s disease from this farm is significantly higher. As the producer, you need to determine what risk you are willing to accept. Also, because of the complicated nature of both Johne’s disease and interpretation of test results, it might be worthwhile to consult your veterinarian to discuss your buying options.

How to decrease your risk of purchasing animals with Johne’s disease

To decrease your risk of purchasing Johne’s disease, do not purchase animals from producers who:

- Tell you they don’t have a problem with Johne’s disease, but have never tested
- Tell you they don’t have a problem with Johne’s disease, but won’t show you test results
- Have sold animals with Johne’s disease, and did not test and cull after they were notified of the problem
- Use cull dairy cows for their ET recipients
- Refuse to test a representative group of cows from their herd

To decrease your risk of purchasing Johne’s disease, be cautious when you purchase animals from producers who:

- Have never heard of Johne’s disease
- Think Johne’s disease is only a dairy disease
- Think one test on one cow at one time completely rules out Johne’s disease

To decrease your risk of purchasing Johne’s disease, purchase animals from producers who:

- Have a Johne’s disease program in place
- Are willing to test some if not all of the herd prior to your purchase
- Are willing to show you their test records and discuss their test program

