NATIONAL JOHNE'S DISEASE EDUCATION INITIATIVE

Johne's Disease – Beef

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Johne's Disease-Veterinarian Roundtable

Bull-buying season is fast approaching, and with it comes big decisions starting with "Where shall I buy my bull(s)?".

Beef producers and beef extension specialists who are in the know about Johne's disease and how the disease can wreak havoc in a cow herd advise cow-calf producers to turn to seedstock producers and bull sales that know and will share their Johne's disease risk status.

"Johne's disease is a serious concern for cow-calf operators," states Dave Sparks, DVM, in an article posted on Purdue University's "The Beef Blog. "Producers who are purchasing replacements (or bulls) need to know that they are not buying the problem. Likewise, producers offering bulls and replacement heifers need to be able to assure prospective buyers that they are free of the problem."

Dr. John Maas, University of California-Davis, points out that one of the more important means of transmission on beef operations is via infected bulls.

"The *Mycobacterium avium* ssp. *paratuberculosis (MAP)* organism can be found in the semen and accessory sex organs of infected bulls," Maas explains. "Additionally, bulls are with the cow herd when the calves are young and, if the bull is infected and shedding the organism in his feces (even when he has no signs of disease), he is exposing all the calves at a time when they are most susceptible.

"The practice of sharing or leasing breeding bulls—particularly older bulls that could be shedding the organism in their feces at high levels—can result in significant spread of Johne's disease in beef herds."

The same applies to purchasing a bull from a seedstock producer who has not tested for Johne's disease. That magnificent beast that has the performance and pedigree records that you so admire just might unknowingly be infected with *MAP* and, as he ages, shed *MAP* in his feces, infecting the entire herd.

Veterinarian Roundtable

Three veterinarians participated in a brief question-and-answer interview about Johne's disease as it relates to seedstock producers and those who purchase animals from seedstock producers. Here are the remarks provided by Jesse Vollmer, DVM, and the Designated Johne's Coordinator for North Dakota; Don Hansen, DVM, Oregon Department of Agriculture state veterinarian; and Michelle Arnold, DVM, large ruminant extension veterinarian, University of Kentucky.

Question #1: **Purebred breeders are in the business to market cattle. How important is it that purebred breeders know their herd's Johne's disease status?**

Dr. Jesse Vollmer: From a marketing standpoint, it is hugely important that seedstock producers know their Johne's disease status. Three key reasons for knowing if you are a low-risk herd are to 1) build confidence in their customers; 2) to limit your liability; and 3) to do the right thing and not spread *MAP* to your customers' herds.

Dr. Don Hansen: Prevention is the name of the game. In general, I think purebred breeders are smart to document their Johne's disease infection status. They are selling genetics and they do not need to sell Johne's disease as well.

If purebred breeders are marketing their herd as a healthy, low-risk herd, then Johne's disease is one of the diseases that they should have tested for and know their herd's status.

Purebred breeders sometimes feel like they are in a "Catch 22" situation. If they test for Johne's disease and find it, they may be out of the business. If they test for Johne's disease and do not find it, they may be challenged because some buyers unfortunately perceive "if you test for it, you must have it." In a worst case scenario, if seedstock producers do not test for Johne's disease and someone buys an infected animal from them, they may be liable and may be out of the business.

Dr. Michelle Arnold: Seedstock producers should anticipate buyers of breeding livestock wanting to purchase

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>
> *— Dr. Michelle Arnold*
> *Large Ruminant*
> *Extension Veterinarian,*
> *University of Kentucky*

USDA

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animals that are not *MAP* infected.

Seedstock herd owners are commonly reluctant to test for Johne's disease for fear that a positive diagnosis will ruin their reputation. However, a herd's reputation may be damaged much more severely by selling a *MAP*-infected animal to a customer and introducing this contagious, incurable disease into his or her herd.

The Voluntary Bovine Johne's Disease Control Program specifies the testing requirements to officially classify the herd. The higher the classification level, the lower the risk for transmitting Johne's disease. The more years of testing following this consistent regimen will yield greater confidence and knowledge of the true Johne's status of the herd.

Question #2: **What questions about Johne's disease should beef/dairy producers who purchase cattle be asking?**

Dr. Jesse Vollmer: I would ask the Johne's disease status of the herd because it can be so economically devastating. Cows are expensive. If you take a cow that should have a longevity of 10 to 12 years in a herd and you're culling her early, you're losing production on that animal. In addition, it can be extremely costly and time consuming to control the disease once it's in your herd. Producers should take steps to not buy Johne's disease.

Dr. Don Hansen: Any time you purchase from a herd and take those animals into your herd you're taking a biosecurity risk. It's not correct to assume the cattle that you are purchasing are free from disease—any disease, including Johne's disease.

From my perspective, if a buyer is concerned about Johne's disease, he should be the one doing the asking. We live in a buyer beware culture. This may sound callous, but it's just safe business practice.

I suggest that buyers ask if the herd has been tested for Johne's disease, what the test results have shown and the herd's official classification level if it's participating in the Voluntary Bovine Johne's Disease Control Program. They then should assess the risk based on the answers given. If the seedstock breeder has not tested for Johne's disease, then the buyer has to assess that risk too.

Dr. Michelle Arnold: Buyers of breeding livestock should strive to purchase animals that are not *MAP* infected. As such, before considering a purchase from a herd, they should be asking if the seller knows their herd's Johne's disease status.

Question #3: **What advice would you give individuals who purchase animals from a herd that does not know its Johne's disease status?**

Dr. Jesse Vollmer: Any time you're bringing in new cattle, you're opening up your herd to disease that could affect the economic viability of the herd. Each buyer knows what he or she is willing to risk, and buying cattle from herds that don't know their Johne's disease status can be risky.

Dr. Don Hansen: Individuals should know that purchasing animals from a herd that does not know its Johne's disease status could result in animals bringing the disease into your herd. Johne's disease is a disease that typically doesn't show symptoms until animals are three years of age or older, yet animals become infected with the bacteria as calves. An infected animal can shed *MAP* and infect herdmates even without showing signs of the disease.

Those purchasing animals should understand that herds that don't know their Johne's disease status might not be a safe herd to purchase cattle from. Individuals just need to know what level of risk they are comfortable with and then if they are willing to live with the consequences of their purchasing decisions.

Dr. Michelle Arnold: Individuals who buy in a situation like this should test the animal before bringing it on-farm or at minimum test and quarantine the animal once it's on the farm. The Johne's disease test of choice would be a fecal sample submitted to a laboratory approved for Johne's PCR.

A single negative test on an individual animal, however, does not guarantee that the animal is not infected with Johne's disease. Additionally, test results in animals under two years of age are even less reliable. That is why knowing the Johne's disease status of the herd from which you are purchasing is strongly recommended.

Secondly, whether an animal is tested for Johne's disease or not, all producers should have biosecurity measures in place to help prevent and control Johne's disease. For example, they should keep calving areas clean, avoid manure build up, keep feed and water sources free of manure. The risk assessment tool can help you and your veterinarian identify the highest risk areas on your farm for Johne's disease transmission, and the management plan is the tool used to identify methods to reduce these risks.

Editor's Note: *According to the Voluntary Bovine Johne's Disease Control Program's classification system, no herd should be stating that it is a Johne's disease-free herd. Instead, herds can state that they are a low-risk Johne's disease herd.*

If you would like to learn more about the Voluntary Bovine Johne's Disease Control Program, please contact your state Designated Johne's Coordinator or go to ***www.johnesdisease.org****.*

Prevention Practices:

You can help prevent the introduction of Johne's disease into your cow herd by:

- ✓ Maintaining a closed herd.
- ✓ Purchasing bulls and replacement females from a herd that has individual cow/calf records, good management practices and is a test-negative herd OR, at minimum,
- ✓ Purchasing bulls and replacements from an owner who will sign a statement with the veterinarian of record that states, to the best of their knowledge, Johne's disease has not been in the herd for the past five years.

Calving Key Time to Prevent, Control Johne's Disease

Some newborn calves simply won't have a chance. That's right. They may be exposed quite quickly after they are born to bacteria that cause Johne's disease: *Mycobacterium avium* sp. *paratuberculosis*.

"The maternity area is the place most calves are likely to get their first exposure to *MAP*," states William Shulaw, extension veterinarian, cattle and sheep, Ohio State University. "The sooner the calves can be removed to a clean place, the less the risk of them ingesting it and becoming infected.

"Likewise, the greater the environmental burden of *MAP* in the maternity area, the more likely the calf is to get an infectious dose before it is removed from the cow."

To help prevent infecting a newborn with *MAP*, these best management practices can be implemented at calving.

Calving practices: corrals

- Use a calving corral only for calving.
- Keep the corral clean and dry and do not allow manure buildup.

- Move cows into the area only when they are close to calving.
- Clip and clean the udders and teats of females prior to calving.
- Use single animal pens with adequate bedding for calving, cleaning manure and bedding after each use.
- Move the pair out of their pen and into clean pasture as soon as the calf has nursed and can walk.
- Do not use pens and working facilities for sick cattle.

Calving practices: pastures

- Use large pastures.
- Keep cow density as low as possible.
- Do not allow manure buildup.
- Clip udders and teats before calving.
- Feed supplemental feed in bunks and off the ground.
- Move feeding sites frequently.
- Move each pair from the calving pasture to other larger pastures as soon as the calf has nursed and can walk.

Orphaned calf practices

- Never feed unknown sources of colostrum.
- Only feed colostrum from healthy low-risk cows or from test-negative cows.
- Never feed unknown sources of milk unless it is pasteurized.
- Only feed "low-risk" milk such as milk replacer, pasteurized milk or milk from healthy low-risk cows, preferably low risk on recent tests.
- Be extremely careful bringing any colostrum, milk or dairy nurse cows onto your place.

For information about Johne's disease, contact your Designated Johne's Coordinator Dr. Heather Hirst, *heather.hirst@state.de.us*, Ph (302) 698-4560 or visit *www.johnesdisease.org*.

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