



Johne's Disease – Beef

NATIONAL JOHNE'S DISEASE
EDUCATION INITIATIVE

Volume 5, Number 1

Winter 2013

A cooperative effort of the National Institute for Animal Agriculture, USDA, APHIS, Veterinary Services, in association with the National Johne's Working Group & United States Animal Health Association

Bull-buying Season: *Don't Buy Johne's Disease*

If you're planning to buy one or more bulls this year, Johne's disease specialists advise you to know the Johne's disease status of the herd from where you're buying your bull. And that status should be "low risk" as indicated through testing. (*Editor's Note: No herd is Johne's disease free. The best of the best can be designated low risk or a test-negative herd.*)

"An important means of transmission on beef operations is via infected bulls," states John Maas, DVM, MS, an extension veterinarian for the School of Veterinary Medicine at University of California, Davis. "The *M. paratuberculosis* organism can be found in the semen and accessory sex organs of infected bulls.

"Additionally, bulls are with the cowherd 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."

Maas adds that 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.

Some bull test station sales have a Johne's disease status requirement before bulls are allowed to be a part of the test station group and sell.

The Indiana Beef Evaluation Program is one test station that has a Johne's disease status requirement for bulls entered into its test: "Bulls must originate from herds that have no clinical signs of Johne's disease (paratuberculosis). In addition, the dam of each bull entered must have a negative Johne's disease test (ELISA or Fecal Culture) anytime between birth of the bull and delivery of the bull to the test station. For ET or foster calves, the female that raised the calf, must have a negative Johne's disease



Nick Judd of Judd Ranch, Kansas, discusses the herd's test-negative status with fellow seedstock producers from New York.

test (ELISA or Fecal Culture) anytime between birth of the bull and delivery of the bull to the test station. Bulls will also be accepted that originate from herds that have had a complete negative herd Johne's disease test (ELISA or Fecal Culture) within the last 12 months. Samples for Johne's disease testing must be collected by a veterinarian and submitted to a laboratory that is accredited/certified by the state of origin Board of Animal Health. Documentation of Johne's disease tests (ELISA or Fecal culture) must be presented with the bull(s) at time of delivery to the test station."

Western Illinois University's beef evaluation station doesn't go to the extent of the Indiana Beef Evaluation Program but it does test bulls for Johne's disease and reassures buyers that bulls are test negative.

While other bull test sales may have a Johne's disease testing or know that bulls are from test-negative dams, others do not. If you want to know that you are pur-



This e-newsletter is brought to you by the National Johne's Disease Educational Initiative funded by USDA/APHIS/VS and managed by the National Institute for Animal Agriculture. Editor: Teres Lambert. To learn more about Johne's, visit www.johnesdisease.org.



chasing a bull from a test station that has a Johne's disease requirement, then it's up to you to ask some questions.

If you plan to purchase bulls private treaty or through a seedstock producer's auction, it's question-asking time again. While some seedstock producers will provide information about their herd's Johne's disease status, others may not. Thus, it's up to the buyer to make the inquiry. Here's where one phone call may have big benefits.

One Missouri seedstock producer learned a lesson about Johne's disease the hard way. He brought Johne's disease to his premises via a purchased animal. While it took the cattleman several years of culling and a heavy emphasis on first-rate management practices, his herd eventually attained low-risk status.

Since his negative experience, this individual is adamant that he isn't the one passing on Johne's disease to another person's herd. To protect his own herd, he now quarantines new animals and doesn't buy from herds that aren't low risk or test negative.

Some seedstock producers argue that testing for Johne's disease may insinuate to potential bull buyers that the herd conducting the testing suspects Johne's disease in the herd. Johne's disease experts and seedstock producers who are proactive with their herd health counter that testing for Johne's disease is a smart move, as that is the only way to actually know the Johne's disease status of a herd.

"A key reason we test is because we want to be confident that none of our animals is introducing Johne's

disease to a customer's herd," states Dave Judd of Judd Ranch, a Gelbvieh, Balancer and Red Angus breeder from Kansas. "Why wear blinders?

"Testing for Johne's disease and knowing you are a test-negative herd is no different from getting certified brucellosis-free."

Did You Know That. . .

...While Johne's disease is almost always introduced into a herd by the purchase of an infected animal, MAP can also be introduced through non-animal sources. These sources include vehicles, shared equipment, obtaining feed with potential manure contamination and cattle coming in contact with surface water that runs through adjacent farms.

...A calf can suck on or lick a manure-contaminated gate or fence or equipment such as a bucket and ingest enough MAP to infect it if the item has been contaminated with MAP-infected manure. Just a little bit of MAP-infected manure can cause a calf to become infected.



Be a smart bull buyer and don't buy Johne's disease. Only purchase bulls from low-risk or test-negative herds. At minimum, purchase animals only from herds with a known Johne's disease status.

Ridgefield Farms — 'Doesn't Make Sense Not to Test'

Ridgefield Farms was the 2012 Georgia Seedstock Producer of the Year. In 1994, Ridgefield Farm was a National Cattlemen's Beef Association Region II Environmental Stewardship Award winner.

With accolades such as these to their credit, it probably doesn't come as a surprise that Ridgefield Farms is among the seedstock farms that takes a proactive stand against Johne's disease. This progressive seedstock business has tested for Johne's disease for more than six years and plan on continue their annual testing program.

"I sell bulls and females and never want to sell Johne's disease to a customer," Steve Whitmore states. "I don't want Johne's disease on my place, and I don't want my customers to bring Johne's disease into their herds.

"Testing has shown that we can confidently tell customers and potential customers that we are a test-negative herd. (Editor's Note: No herd can claim to be Johne's disease free. The best of the best can only claim to be a low-risk herd or a test-negative herd.)

Located in the heart of the Blue Ridge Mountains in southwestern North Carolina, near Georgia and Tennessee, Ridgefield Farms owns and manages about 100 head of registered Braunvieh, about 80 head of registered Angus and about 90 commercial females. In their April sale, they typically sell 40 or so Angus, Braunvieh and BraunAngus bulls and 50 or so bred cows and pairs. (This year's sale is April 13.)

"In addition to selling bulls and females to customers, we also have a branded line of beef, Brasstown Beef," Whitmore adds, "so it just makes sense to use all tools available to keep my animals healthy and protect my brand."

Whitmore doesn't buy into the "testing for Johne's disease might make potential customers wonder if we think our herd has Johne's disease" theory.

"We check our herd for persistently infected BVD, so why don't test for Johne's disease?" he states. "To me it doesn't make sense not to test when you're selling animals to others as well as selling your own branded beef.

"I would never want to be the guy who introduced Johne's disease to anyone's herd."

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.



Ridgefield Farm is proactive when it comes to herd health--and has been testing for Johne's disease for more than six years. Owner Steve Whitmore maintains that it is just good business sense to test for Johne's disease.

Johne's Disease - Going, Going, Gone??

Federal funding has disappeared, but Johne's disease has not gone away. This money-robbing disease—caused by the bacterium *Mycobacterium avium* ssp. *Paratuberculosis*, commonly referred to as *MAP*—is present in an estimated eight out of 100 beef herds.

Dr. Ernest Hovingh, extension veterinarian, Pennsylvania State University, says the news about vaccines to help control JD is not “overly promising” at this time. He adds that, while efforts are being made to develop better and more effective vaccines, the availability of any such vaccine is most likely several years away.



*Dr. Ernest Hovingh,
Extension Veterinarian,
Pennsylvania State Univ.*

But does this mean that we should give up on Johne's disease?

“Not at all,” Hovingh states. “The goal for most infected herds should be to eliminate virtually all clinical Johne's disease animals and

achieve and/or maintain only a very low level of infection. The good news is that it appears that this is quite doable.”

A number of recent studies have examined the efficacy of various management practices at reducing the transmission of Johne's disease within a dairy herd.

“Studies from Minnesota, Wisconsin and Canada suggest that implementing management factors to reduce calf-hood exposure to the *MAP* bacteria is crucial to reducing Johne's disease,” Hovingh states.

Bill Epperson, DVM, extension veterinarian, South Dakota State University Medicine Department and Animal Disease Research and Diagnostic Laboratory, advises producers who suspect an animal is infected with *MAP* to place the animal in strict isolation and test to confirm Johne's disease. If the animal tests positive, he says “cull her.”

Critical management practices

To minimize the level of infection and the impact of this disease in your herd, Epperson and Hovingh offer several relatively easy and inexpensive management practices that you can use.

One highly important management practice is to reduce the exposure of calves to manure in the calving area by ensuring that the pen is kept extremely clean at all times. Ideally, you should have only one cow in a maternity pen at a time and clean between calvings. At minimum, all bedding and debris should be removed and pens rebidged with clean bedding.

“Any procedure that helps assure that the susceptible newborn calves will have minimal contact with potentially infected fecal material will help limit the spread of Johne's

disease,” he explains.

If calving pens are constructed of impervious materials, Epperson advises, if possible, that pens be disinfected between calvings.

“Although no disinfectant is completely effective against *MAP*, orthophenyl phenate is at least partially effective,” he adds.

Another practice is to maintain turnout pastures and minimize calf contact with infected manure. Epperson points out that multiple turnout lots are preferable to one, large turnout pasture. The goal of this management practice is to limit the number of potentially infected cows a young calf may encounter.

“It can also be a useful technique for the control of other infectious disease—such as scours—of baby calves,” he interjects.

Three other effective management practices include spreading manure onto non-pastured land, not contaminating feed for young stock with manure and limiting access to wet, low-lying areas. The “why” behind these practices: *MAP* can survive for nine months in manure slurry, 11 months in soil and 17 months in water.

“What the calves are fed is also very important,” Hovingh notes. As such, it's important that orphan calves or calves provided supplement colostrum be given *MAP*-free colostrum

“Colostrum should be fed from cows that have at least one negative *MAP* test, and/or the colostrum should be properly heat-treated prior to feeding. Excess colostrum from test-negative animals can be frozen for later feeding to calves born to test-positive dams.”

Johne's disease experts discourage the pooling of fresh or frozen colostrum or milk from multiple cows.

“In extreme situations feeding of colostrum replacers might be justified,” Hovingh elaborates. “Similarly, if milk replacer is not being fed after colostrum, pasteurized whole milk should be offered. Manure contamination of colostrum or milk should be carefully avoided.”

Hovingh points out that testing of cows using blood or manure *MAP* tests can be a useful addition to a herd management program. He adds, however, that such tests should not be considered as the first, or only, practice to be implemented.

“Simply removing test-positive animals without implementing other management practices is a very, very slow—and usually ineffective—way to make progress at controlling Johne's disease in a herd,” Hovingh stresses.

Hovingh says, in general, animals that have a “high-positive” test result are much more likely to develop clinical disease than low-positive or negative animals, and are much more likely to have their offspring test positive later in life. His advice is that these animals should be sold for slaughter rather than be allowed to calve again on the farm.