



NATIONAL JOHNE'S  
EDUCATION INITIATIVE

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

# Johne's Disease – Beef

## Free Online Johne's Disease Course Available to Beef Producers

The occurrence of Johne's disease in the United States was first described in 1908 in a paper, "A note on the occurrence in America of chronic bacterial dysentery of cattle," authored by Leonard Pearson, then Dean of the veterinary school at the University of Pennsylvania. That was 101 years ago, and, unfortunately, Johne's disease is still a concern today.

Dr. Michael Carter, National Johne's Disease Control Program Coordinator, National Center for Animal Health Programs, USDA-APHIS-VS, points out that the National Animal Health Monitoring Systems (NAHMS) Beef 1996 study estimated that eight out of 100 U.S. herds may be infected with the bacteria that causes Johne's disease. Infected beef herds usually experience lighter calves at weaning and cows tend to be slower to breed back.

"Johne's disease is a slow and progressive bacterial disease of the intestinal tract that affects ruminants and is caused by the bacterium *Mycobacterium avium paratuberculosis*," Dr. Carter states. "It causes significant economic loss for producers whose animals have the disease, and the goal of every producer should be to prevent getting it on their farm if they don't have it or control the disease to reduce the economic impact in herds with the disease.

"The more producers know about Johne's disease, the more progress we can make toward reducing this costly disease."

To help beef producers understand Johne's disease and become acquainted with preventive measures, an online course has been developed specifically for beef producers. Underwritten by a grant from USDA and developed by the University of Wisconsin-Madison School of Veterinary Medicine, the online course covers the causes of Johne's disease, how Johne's disease spreads, how to prevent Johne's disease from entering your herd, how to test for Johne's disease and management practices to use to control infections. The course also explains how the National Bovine Johne's Disease Control Program works and how producers can participate in the national program.

"Each course is free to producers," states Dr. Elisabeth Patton, Designated Johne's Coordinator for Wisconsin and vice chair of the Committee on Johne's Disease, U.S. Animal Health Association. "Plus,

producers can complete their respective module in less than 60 minutes."

Taking the Johne's disease online course involves six simple steps. The first five steps take about five minutes to complete. The final step—partaking in the course—will involve about 30-45 minutes.

**Step #1:** Go to the University of Wisconsin School of Veterinary Medicine web site, [www.vetmedce.org](http://www.vetmedce.org), where you'll see the home page titled "Veterinary Continuing Education." Once at this page, click on "Courses" written in red at the lower left of the page.

**Step #2:** Once at the "Courses" web page, click on "Johne's Disease" located in the left-hand column.

**Step #3:** A new web page will appear. On this page, click on "Johne's Disease Courses for Producers."

**Step #4:** You're now at a new web page that lists the six Johne's disease courses, and you need to simply click on the "Beef Producer" course title.

**Step #5:** Once at your species page, a list of what you'll learn is listed along with other relevant information.

**Step #6:** Begin your species-specific course. Producers wanting a certificate of course completion are asked to register before taking the course, and will be required to take a quiz after they watch and listen to the presentation.

The beef producer online module is like sitting in a classroom, only you're sitting at your computer. Two speakers share information, and information is shown on slides.

"If you have a computer, then you can add to your knowledge base about Johne's disease," Dr. Patton states. "What a great investment of a producer's time."

To learn more about Johne's disease prevention and control, please contact your state Designated Johne's Coordinator. A list of state DJCs is available online at [www.johnesdisease.org](http://www.johnesdisease.org).



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## Cows Being Shipped Due to Chronic Diarrhea?

### Think Johne's Disease & Test

Johne's (pronounced "Yo-nees") disease is a chronic, incurable, contagious disease estimated to be present in eight out of 100 beef herds. And, while Johne's disease isn't as big of a problem in beef cattle as in dairy cattle, it's still an important disease to prevent and control. As Dr. Dave Dargatz with the National Animal Health Monitoring System, Fort Collins, Colo., once stated, "More and more countries are undertaking Johne's disease control programs. I think, as we look down the road, we can't help but think there is a potential that this could become an important trade issue with countries in Europe, Australia and other that have taken on the control of Johne's disease in their cattle populations."

Infected animals shed large numbers of the disease-causing bacteria in their feces, leading to contamination of feed and water sources. Infected animals can also shed the bacteria in their colostrum and milk, and infected dams can

pass the disease on to their offspring. Research shows that, while the bacterium cannot multiply outside the animal in nature, it can survive in contaminated soil or water for more than a year because of its resistance to heat, cold and drying. Johne's disease must be managed as a herd problem and not tackled as an individual cow disease. Research shows that diagnosis of one clinically-infected animal in a herd of 100 cows implies that other animals might well be infected.

### Why Test?

If one or more animals have been culled from a herd for unresponsive chronic diarrhea combined with reduced milk production and thin condition, then Johne's disease could be

behind this deterioration. Experts maintain that samples from clinical suspects should be collected before the cows leave the herd.

The Top 6 reasons why a herd should be tested for Johne's disease include:

1. Determine if an animal exhibiting definite clinical signs is Johne's disease positive and should be culled.
2. Identify infected animals with suspicious clinical signs early before they further contaminate facilities and lose salvage value.
3. Evaluate the extent of infection in your herd.
4. Monitor progress of control efforts.
5. Know if you are marketing infected or low-risk cattle and, as a result, know if you are helping spread the disease to producers' herds or helping producers prevent Johne's disease from entering their herd.
6. Know if you are about to purchase a Johne's disease

test-positive or low-risk animal before it's brought into the herd.

"Before testing any animals, producers should know their goals for testing and how test results will be used," states Dr. Andy Schwartz, Texas Animal Health Commission, and Chairman of the Committee on Johne's Disease of USAHA.

"Discussions with your veterinarian will determine which test is best for your situation, with the frequency of testing and decisions made based upon the test results dependent of what is practical for your enterprise. That said, no single test will detect all infected animals."

To learn more about specific testing requirements or regimens for Johne's disease, contact your Designated Johne's Coordinator or state animal health department.

### *<sup>1</sup>Recommended test regimen for detection of Johne's disease in cattle based on herd type and testing purpose*

Testing Purpose	Seedstock	Cow-Calf
Confirm a clinical diagnosis in a herd with no prior confirmed JD cases	Biopsy specimens, necropsy, bacterial culture or PCR assay – individual animals	Necropsy, bacterial culture or PCR assay – individual animals
Confirm a clinical diagnosis in a herd with prior confirmed JD cases	Biopsy specimens, necropsy, bacterial culture or PCR assay – individual animals	ELISA, bacterial culture or PCR assay – individual animals
Herd classification – infected or not infected*	Whole-herd testing, target testing or bacterial culture of environmental samples	Whole-herd testing, target testing or bacterial culture of environmental samples
Control disease in herd with known infection, high prevalence and clinical disease and owner is concerned	Bacterial culture – individual animals	ELISA
Surveillance (estimation of biological burden)	Not recommended	Bacterial culture of clinically suspect animals
Eradication	Bacterial culture – individual animals	Bacterial culture – individual animals

<sup>1</sup>For declaring Voluntary Bovine Johne's Disease Control Program Test Negative Status, use the testing strategies outlined in the Uniform Program Standards for the Voluntary Bovine Johne's Disease Control Program.

<sup>1</sup>"Consensus recommendations on diagnostic testing for the detection of paratuberculosis in cattle in the United States," Michael T. Collins, DVM, PhD, DACVM; Ian A. Gardner, BVSc, MPVM, PhD; Franklyn B. Garry, DVM, MC, DACMIM; Allen J. Roussel, DVM, MC, DACVIM; Scott J. Wells, DVM, PhD, DACVPM; JAVMA, Vol. 229, No. 12, December 15, 2006.