

THE MISSISSIPPI VOLUNTARY JOHNE'S DISEASE PROGRAM

A cooperative effort between the Mississippi Board of Animal Health (MBAH) and the USDA APHIS Veterinary Services has developed the Mississippi Voluntary Johne's Disease Program. This program consists of both a test-negative "Status Program" for producers wishing to certify the status of their herd for marketing purposes and a Management Plan for herds with infected animals. This program follows guidelines recommended by the National Johne's Disease Working Group of the United States Animal Health Association (USAHA).

For more information on Johne's disease, contact your local veterinarian, the MSU Veterinary Extension office (662-325-2283), or the State Johne's Disease Coordinator at the MS Board of Animal Health (601-359-1170).

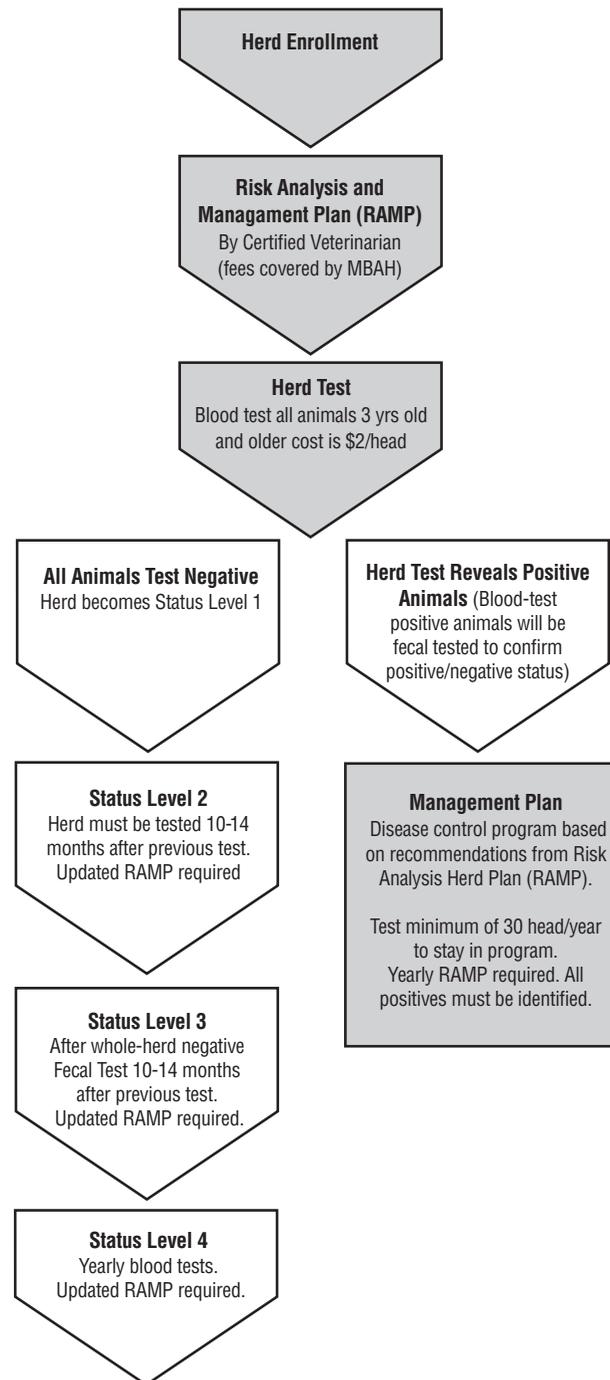
Copyright 2007 by Mississippi State University. All rights reserved. This publication may be copied and distributed without alteration for nonprofit educational purposes provided that credit is given to the Mississippi State University Extension Service.

By **Dr. Carla Huston**, Assistant Professor, Mississippi State University College of Veterinary Medicine Pathobiology/Population Medicine Department

Discrimination based upon race, color, religion, sex, national origin, age, disability, or veteran's status is a violation of federal and state law and MSU policy and will not be tolerated. Discrimination based upon sexual orientation or group affiliation is a violation of MSU policy and will not be tolerated.

Publication 2457

Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. VANCE H. WATSON, Director (300-01-08)



WHAT YOU SHOULD KNOW

about Johne's Disease in Beef Cattle



Supported by
the Mississippi Board of Animal Health,
the Mississippi State University College of Veterinary Medicine,
and the Mississippi State University Extension Service
through a cooperative grant provided by the USDA



History of Johne's Disease

Johne's (pronounced "yo-knees") disease is an infectious bacterial disease caused by *Mycobacterium avium* subspecies *paratuberculosis* (MAP). It is a chronic progressive disease affecting the small intestine of cattle and other ruminants, including sheep, goats, and deer. First described by Heinrich Johne in 1895, the disease has become widespread throughout the United States and many other parts of the world.

Clinical Signs

Johne's disease is an infectious disease with profuse, persistent diarrhea and chronic weight loss, despite a normal to increased appetite. Animals infected with the organism often show no signs of the disease until after 2 years of age, although it is believed most animals are infected shortly after birth. Infected animals pass the MAP organism through their feces. Calves commonly become infected through drinking contaminated milk or colostrum or through contact with dirty udders or other contaminated feed and water equipment.

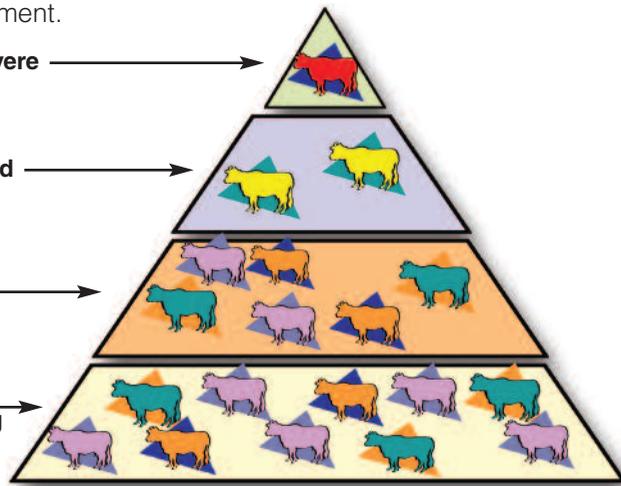


Clinical – severe

Clinical – mild

Subclinical – shedding

Subclinical – not shedding



The "Iceberg Concept" of Disease

Because Johne's disease develops slowly, an infected animal can remain in the herd for many years before clinical signs appear. These apparently healthy, but infected, animals can infect other animals in the herd. The organism lives a long time in the environment, making elimination difficult. Sudden herd outbreaks rarely occur. Instead, there may be months or years between individual cases of disease.

Keys to Prevention and Control

The first step in any disease control program is to determine the needs and goals of your operation. Assessing herd management lets you identify potential risk for infectious diseases on your farm. Herd management plans help you prioritize your health and production goals. In most cases, you can't eliminate all diseases from an operation, but a risk management plan helps you effectively focus your efforts.

Establish Herd Status

Establishing the status of Johne's disease in the current herd is the first step in attempting to maintain or develop a Johne's negative herd. You can do this through testing the blood of all breeding-age animals. If the test indicates you have positive animals, then confirmation tests, usually performed on feces, will provide a definitive diagnosis of Johne's disease.



Besides decreasing herd performance and causing premature culling, Johne's disease can hurt the sale of breeding stock. As both buyers and sellers become more aware of Johne's disease in cattle, the demand for testing and disease-free assurance will increase. Also, as an industry, it is important to improve and promote the health and well-being of all livestock.

Determine the infection status on your farm so you can either prevent introduction of the disease or reduce the disease if it is in your herd. Your herd veterinarian is the most qualified person to help you make health-related decisions about your farm and help you develop testing strategies.

Manage and Prevent



Develop management plans, and tailor them to the current needs and status of your herd. If your herd is determined to be infected, take action to prevent the spread of Johne's disease within groups of animals on your farm. If your herd is negative, take action to prevent introduction of the disease from new or outside sources.

Biosecurity will play a big role in any disease control plan. Prevention and control recommendations are centered on reducing an animals' exposure to potentially infected feces. Calves should be born in a clean and uncrowded environment to reduce manure contamination of the dam's udder. Using feed bunks and water troughs as well as designating separate equipment for feeding and manure cleanup may also help reduce fecal exposure.

Isolate any animals showing signs of disease until you get the definitive cause of the symptoms. Quarantine any new additions to the herd, including bulls and embryo recipients, until you can treat them and know they are free from disease. Good biosecurity measures will help prevent and control many other infectious diseases of cattle, such as *E. coli*, scours, and coccidiosis.