

Johne's Disease Control Demonstration Project for the Texas Dairy and Beef Industries

Johne's disease (JD) is a chronic, insidious disease of ruminants worldwide, caused by the bacterium *Mycobacterium avium* subsp. *paratuberculosis* (MAP). Infection usually occurs in the first few months of life but the first signs of disease may not be apparent for years. Like all infectious microorganisms, the rate of spread of MAP through a herd is directly related to the number of infected and susceptible animals in the herd. Currently, there is no practical, effective treatment for JD, so identification and culling of infected cows in combination with on-farm biosecurity, including purchasing replacements from herds of known status, are vital to developing a JD free herd.

The United States Animal Health Association (USAHA, 1998) in conjunction with federal (i.e., USDA APHIS-VS) and state agencies and organizations (e.g., Texas Animal Health Commission, Texas Johne's Working Group) have initiated a voluntary 4-stage Johne's Disease Herd Status Program for cattle in an effort to encourage identification of JD-free herds so that spread of the disease by replacement cows or herd consolidations can be minimized. Despite some successes in attracting cattle producers to enroll in the program and in controlling the disease in some regions of the country, progress remains slow. Most of the success of the program for dairy herds has come in regions of the country with smaller herds that aren't expanding.

In the Western region of the country, dairy herds are much larger (averaging over 400 head per herd in Texas) and are frequently expanding. These larger herds provide a unique set of challenges and opportunities in adopting Johne's Disease Control Programs. Many of these herds have extremely high culling rates so fewer symptoms of Johne's Disease are noted. Most of these herd owners expect to know what type of return on investment they can expect to receive from implementing any new practice, whether it is adopting a total mixed ration feed delivery system or preventing a disease which takes years to manifest itself in the animal.

To properly understand the potential usage of currently available control measurements against Johne's disease, Texas Cooperative Extension, supported financially by USDA-ARS, implemented the Johne's Disease Control Demonstration Project for the Texas Dairy and Beef Industries starting activities in September 2003. Currently in our fourth year of activities, the project has the primary objective of evaluating the long-term effectiveness and feasibility of management related disease control methods on the development of Johne's disease and infection in four beef and two dairy herds. The secondary objectives are to provide information and materials for education and training of public and private practice veterinarians and cattle producers; develop and evaluate management, testing, and monitoring strategies for use in control of Johne's disease in cattle herds; and to critically analyze results to determine additional research needs required. To fulfill these requirements, we have conducted herd risk assessments on the beef ranches involved in the project and implemented herd plans to reduce Johne's Disease. As the project evolves, epidemiological and production data of the enterprises involved in the project are collected and analyzed.

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