

Alberta's Johne's Disease Control Program

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■ Take Home Messages

- Johne's disease is an infectious, progressive and debilitating disease of livestock. An infected herd not only impacts production and trade but may also have potential link with Crohn's disease in humans.
- Alberta Johne's Disease Control Program is comprised of four integrated components: awareness and education; veterinary accreditation; Voluntary Johne's Herd Status Program; and collaborative research
- Veterinary Accreditation Training Sessions were conducted in the fall of 2001 to provide information on Johne's disease and the Voluntary Johne's Herd Status Program to private veterinary practitioners who will be participating in the program.
- Alberta has implemented a Voluntary Johne's Herd Status Program for cattle.
- Although Johne's disease is insidious, it can be controlled with commitment and long-term persistence on the part of producer.

■ Introduction

Johne's disease is an infectious, progressive and debilitating disease of livestock for which there is no treatment. It is a disease contracted in the first few months of life that affects animals as adults. An infected herd not only impacts production and trade but may also have the potential for zoonosis (i.e. potential for human transmission). The rate of spread between animals is directly related to the number of infected animals in a herd but it can be controlled with commitment and long-term persistence on the part of the producer.

Alberta Agriculture Food and Rural Development (AAFRD) has worked for the past five years to design and implement an integrated, comprehensive Johne's

disease research and control program. In conjunction with the Alberta Johne's Working Group (AJWG), a committee comprised of government, ruminant livestock industries and veterinary representatives, AAFRD has developed a Johne's Disease Control Program for multiple ruminant species geared specifically to the needs of Alberta's livestock industries.

Alberta's Johne's Disease Control Program deals with Johne's disease on many fronts. Basic prevalence and applied risk factor research is combined with the development of awareness and educational materials for cattle producers and herd veterinarians as well as interactive programs that allow producers and practitioners to play an active role in the control of Johne's disease. Through education and awareness, research and active participation, Alberta's livestock industry will be better equipped to control Johne's disease.

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■ Awareness and Education

Awareness is the first step in any major undertaking but takes on significant implications in a project such as the Johne's Disease Control Program. The participation and input of producers is critical to the control of Johne's disease and, without a basic understanding of the symptoms and ramifications of the disease, producers have little motivation to participate in the Johne's Disease Control Program. As a result, AAFRD makes every effort to educate and keep stakeholders apprised of the latest developments in Johne's disease.

In 2001, AAFRD, together with industry sponsors, launched a traveling road show to bring information to the producers and practitioners of rural Alberta. The purpose of the road show was multi-faceted in that it provided a means to update producers on the latest Johne's research findings at the Food Safety Division (FSD), to inform and receive feedback on proposed Johne's disease Control Programs and to improve awareness of departmental activities.

AAFRD is also in the midst of an awareness and education program to provide producers and practitioners with applicable resources on the topic of Johne's disease. AAFRD has established a website devoted to the Alberta Johne's Control Program that provides information as well as links to related sites (<http://www.agric.gov.ab.ca/livestock/johnes-control/>). Additionally, AAFRD is in the process of developing printed materials directed to producers as well as manuals designed for use by veterinarians.

■ **Veterinary Accreditation**

The FSD of AAFRD established the provincial Veterinary Accreditation Program in conjunction with the Alberta Johne's Working Group to support the international standing of Alberta's Johne's Herd Status Program. Under the program, private veterinary practitioners are accredited by the Alberta Johne's Working Group for a period of three years to work with producers to manage Johne's disease. The end result is a team of specialized veterinarians who provide an added layer of confidence to government, producers and trading partners alike.

Besides being a requirement of the Voluntary Cattle Johne's Herd Status Program, accreditation allows private veterinarians to offer a wider range of service to their clientele and to expand their personal level of expertise. The accreditation process is designed to provide private veterinarians with information specific to Johne's disease, the Voluntary Cattle Johne's Herd Status Program, program logistics, the protocol of sampling and issues relevant to control of Johne's disease. After training is complete, the accredited veterinarian is better equipped to provide background information to producers, collect and submit samples, interpret lab results and to petition for certification of herd status.

AAFRD and the Alberta Johne's Working Group have jointly conducted Johne's Herd Status Accreditation training sessions across Alberta. Each session consisted of four and a half (4½) hours of Continuing Education certified by the Alberta Veterinary Medical Association. Currently, 65 Alberta veterinarians have been accredited for the Voluntary Johne's Herd Status Program.

■ **Voluntary Cattle Johne's Herd Status Program**

It is critical to establish and increase the probability of a livestock herd's freedom from Johne's disease. The Voluntary Cattle Johne's Herd Status Program is an Alberta initiative to improve public confidence in the industry's commitment to reduce the likelihood of Johne's disease in cattle. At this time, the concept of a national Johne's disease control program is also under consideration.

The Alberta Johne's Working Group oversees and manages the Voluntary Johne's Herd Status Program with audit and certification services provided by AAFRD. The program requires the voluntary participation of the producers from across the Province. Herd veterinarians who elect to work with producers wanting to enroll in the Alberta's Voluntary Cattle Johne's Herd Status Program to manage Johne's disease, must receive accreditation from the Alberta Johne's Working Group.

Initially, interested cattle producers must contact an Alberta Johne's Working Group-accredited veterinarian to enrol in the herd status program. The accredited veterinarian responds with specific information on Johne's disease and the Voluntary Cattle Johne's Herd Status Program to assist each producer with the decision of whether to participate in the Program.

Once the herd is enrolled and has been assigned its confidential coding number, random samples are collected by the accredited veterinarian and submitted to a USDA certified laboratory for testing to determine the presence or absence of Johne's disease. If the disease is present, an accredited veterinarian tailors a control program to the herd. Where the disease is absent from the herd, the producer and practitioner work to maintain this status and to market it. The veterinarian applies to the Alberta Johne's Working Group, with supporting documentation, for certification of the herd status level by AAFRD (Fig. 1).

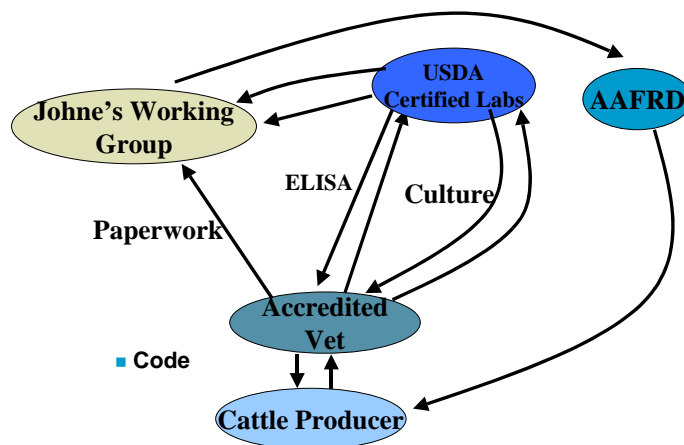


Figure 1. Schematic of Voluntary Cattle Johne's Herd Status Program: Organizational Control

It is essential that Alberta's program be economical, valid and not subject producers to concerns about false positive results (likelihood of positive results in animals known to be free of the disease). The Voluntary Cattle Johne's Herd Status Program provides all producers, regardless of the size of their herd, a means to initially assess their status with minimal investment. Although modeled after the United States Animal Health Association (USAHA) protocol for the preliminary stage, Alberta's Voluntary Johne's Herd Status Program differs substantially in the subsequent levels in that they are based on the length of time and number of times the producer subjects the herd to testing.

The Alberta method of level classification entails a quicker, more cost effective and highly specific alternative to the USAHA program.

Simply stated, Alberta certifies four levels of herd status, each with increasing degrees of confidence that the herd is free from Johne's disease (Fig. 2).

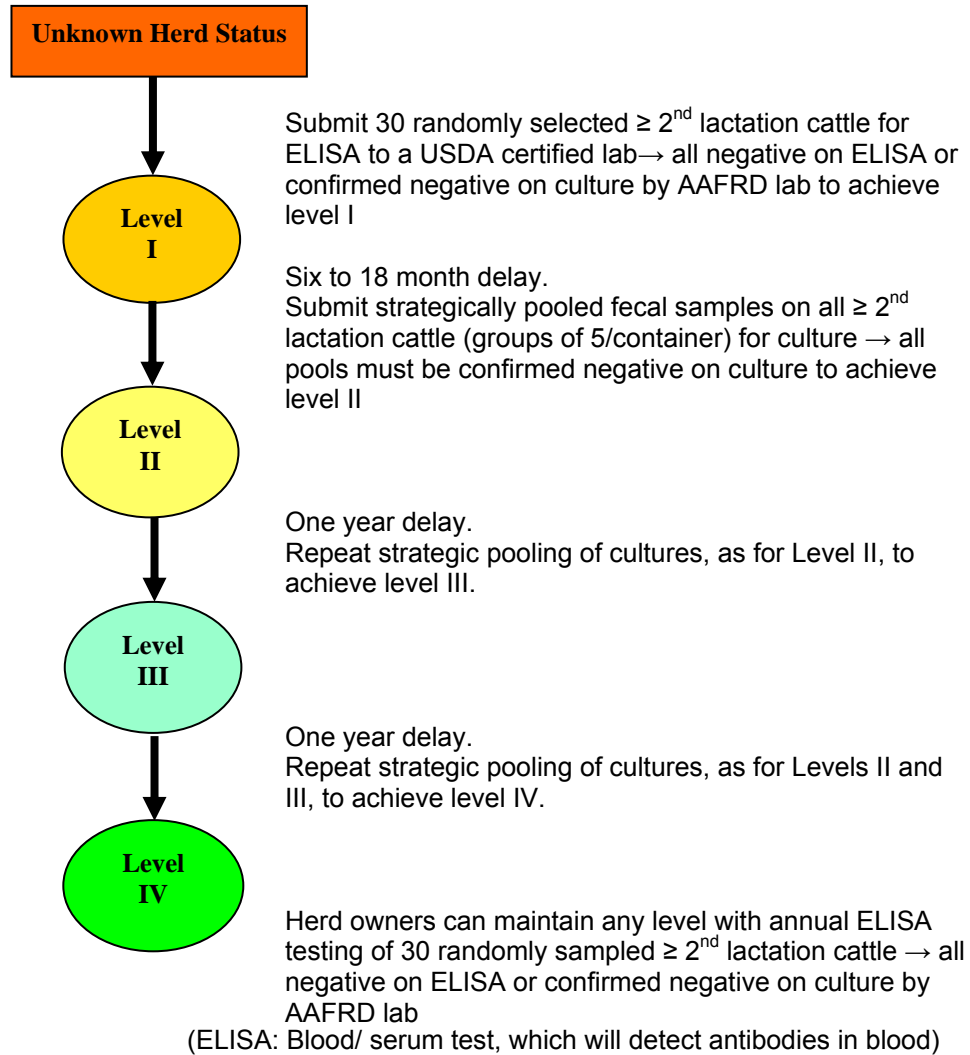


Figure 2. Schematic of Voluntary Johne's Herd Status Program: Levels

While the Voluntary Cattle Johne's Herd Status Program does not certify freedom of the herd from Johne's disease, it does certify a lowered risk of infection for the herd compared to a herd of untested animals. Through the combined efforts of producers, practitioners, government and industry, the Voluntary Cattle Johne's Herd Status Program streams test positive herds into educational and control programs. This process is assisted through a herd coding system that maintains confidentiality and prevents labeling the herd positive. Voluntary vigilance, changes in management and biosecurity, on the part of the principals in the Program, provide improved confidence of disease status to buyers and sellers of livestock.

Note: The movement of animals into herds participating in the voluntary program is governed by either the herd status of the purchased animal, testing and/or isolation of the purchased animal.

■ Collaborative Research

Upcoming research in Alberta explores the prevalence and risk factors for Johne's disease in provincial dairy and beef herds (100 herds of each) and will validate strategically pooled fecal cultures in infected herds. Research for the dairy component of Johne's disease started in winter 2002 and the beef component will follow later in the year.

Other areas of investigation, as they pertain to Johne's disease, include:

- ▶ Studies into how to improve Johne's Disease diagnostics,
- ▶ Practitioner and producer surveys to determine levels of awareness, and
- ▶ Prevalence studies in cull ewes and elk.

Research results will be used to develop producer and practitioner information packages, promote the program, update website and communication material and to advertise herd status accomplishments as well as to provide information to interested parties.

■ References:

Scott, H. Morgan, Sorensen, Ole, Manninen, Ken, Ollis, Gerald. (2001) An Integrated Johne's Disease Control Program for Cattle in Alberta. In: Animal Health Forum, June 2001. AAFRD, Edmonton, Alberta.

