ERADICATION OF BVDV IN THE UPPER PENINSULA OF MICHIGAN: A PROGRAMMED APPROACH TO DISEASE CONTROL IN BEEF AND DAIRY HERDS

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Bovine viral diarrhea virus (BVDV) causes severe economic and productivity loss in cattle operations including: reproductive failure, respiratory disease and immune suppression. Many countries have implemented BVDV eradication programs but in the USA, while producers or producer groups have controlled BVDV in their herds, a comprehensive state, regional or national eradication program has not been initiated or demonstrated. The objective of this multidisciplinary project is to initiate a regional, voluntary BVDV eradication program in the Upper Peninsula (UP) of Michigan, USA. The purpose is to identify benefits and obstacles of such a program and develop a feasible model that may be adopted in other parts of the USA. The UP was chosen because it is geographically isolated and most cattle are exported from the region. The eradication program focuses on:

1) education;
2) identifying and eliminating persistently infected (PI) carriers of BVDV;
3) biosecurity; and
4) appropriate vaccination.

The key to this voluntary program's success will be engagement of stakeholders including producers, veterinarians, and MSU Extension offices. The program began in 2008 with educational meetings at multiple locations. Cattle producers were identified, contacted, provided educational information, signed up to participate and written control plans were then implemented. The testing program involves producers collecting ear notch samples and local Extension offices pooling and shipping to MSU DCPAH. Testing and data management is being provided by MSU DCPAH. Through May 2010, 243 herds and 22,068 head, out of an estimated 500 UP herds and 40,000 head, have signed up for the program (49% of herds, 55% of cattle). Testing has occurred in 203 herds, with 14,682 ear notches tested, and BVDV PIs have been confirmed in 7 herds (3.4%) and 19 head (0.13%). In the first five counties targeted, 80% of herds have agreed to participate. An additional bio-security outcome has been implementation of mandatory BVDV testing of cattle exhibited at the UP State Fair. The project goal is to have tested for and controlled BVDV in 80% of the beef and dairy herds and 95% of the cattle in the UP by 2012. Further, we hope to demonstrate that a program consisting of bio-security and vaccination can maintain BVDV PI-free status and thus increase marketing opportunities and improve herd health and performance for beef and dairy producers in the region.

Keywords: BVDV, Eradication Program