Incidence of Herds Infected with Bovine Viral Diarrhea Virus in Four Western Counties Enrolled in the Michigan Upper Peninsula BVDV Eradication Program

E.M. Corbett[1], *DVM;* **D.L. Grooms**[1], *DVM, PhD;* **S.R. Bolin**[2], *DVM, PhD;* **B. Bartlett**[3], *DVM*
[1]*Department of Large Animal Clinical Sciences, Michigan State University, East Lansing, MI 48824*
[2]*Department of Pathobiology and Diagnostic Investigation, Michigan State University, East Lansing, MI 48824*
[3]*Michigan State University Extension, Michigan State University, East Lansing, MI 48824*

Introduction

In 2007, the Michigan Upper Peninsula BVDV Eradication Program was launched. The purpose of this project is to eradicate BVDV from a geographic area and, in doing so, identify benefits and obstacles of a BVDV eradication program and demonstrate a feasible model that may be adopted by other parts of the US. The purpose of the current report is to present initial findings from the eradication program in the four counties that compose the western one-third of the Upper Peninsula of Michigan.

Materials and Methods

Source population: The cattle population for this study was located in the four western counties in the Upper Peninsula of Michigan (Baraga, Houghton, Keweenaw, and Ontonagon). According to the 2007 USDA National Agricultural Statistics Service (NASS) survey, there were 104 herds with a reported 4,363 cattle in this region. Seventy-five herds with a reported 3,784 cattle were initially registered for testing during the first year of the Michigan Upper Peninsula BVDV Eradication Program. Of these 75 herds, 55 herds submitted samples for testing. 49 herds completed whole herd testing of all calves, open cows, replacement heifers, and bulls. From these herds, 1,549 ear notch specimens were submitted for BVDV screening. Ear notch specimens were pooled in batches of ten and then tested for BVDV using reverse transcriptase-polymerase chain reaction (RT-PCR). Questionnaire: All individuals who agreed to participate in the Michigan Upper Peninsula BVDV Eradication Program were asked to fill out a short questionnaire at registration. Information collected included vaccination history, biosecurity practices, previous BVDV history, and veterinary care.

Results

Whole herd screening for BVDV was completed on 49 herds. Of the 1,549 animals tested, no animals were positive for active infection with BVDV, using RT-PCR on pooled ear notches. A vaccination program that included a commercially available BVDV vaccine was reported by 24 herds (49%), while 23 herds (47%) reported having no vaccination program on the farm. Two herds (4%) did not report vaccination status. Only one herd reported having BVDV in the past. Of the 49 herds that completed testing, 22 (45%) reported not using a veterinarian. Only seven herds (14%) reported fence line contact with other herds. In regards to movement of cattle, 14 herds (28.5%) had no movement of animals onto the premises, 16 herds (32.5%) had only a bull enter the herd for breeding purposes, and 19 herds (39%) brought in replacement animals to the herd.

Significance

BVDV was not found in the study herds sampled in the western Upper Peninsula of Michigan. Closed herds and farms with limited movement of cattle into and out of the region may play a role in the lack of disease. One factor that is concerning is the overall lack of vaccination programs and use of veterinarians in many of the farms surveyed. While there was no BVDV detected in the western Upper Peninsula at the time of this study, these factors may increase the risk for BVDV infection in the future.