

Effects of Testing and Removal of Persistently Infected Bovine Viral Diarrhea Virus Feeder Calves on Morbidity and Mortality of Home Pen-associated Feeder Calves

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Introduction

Crossbred feeder calves (2,868 head 20 lots) were tested for bovine viral diarrhea virus persistent infection (BVD PI). The effects of testing and removal of persistently infected bovine viral diarrhea virus feeder calves on morbidity and mortality of home pen-associated feeder calves were determined.

Materials and Methods

Ear-notch biopsy samples were collected from all cattle at re-vaccination (10 to 14 days on feed) and submitted for BVD PI identification by antigen-capture ELISA. If an animal was confirmed BVD-PI positive by ELISA, it was immediately removed from the pen.

Results

BVD PI prevalence rate was 0.34% (10 head). Five of the 20 pens (25 %) had a BVD PI calf in the population. Morbidity rates were increased in cattle exposed to BVD PI animals (30.1%) relative to cattle not exposed to a BVD PI animal (18.2%). Thirty percent of total pulls in the pens exposed to BVD PI animals occurred during the first week on feed, compared to 15% of total

pulls in non-BVD PI pens. The percentage of pulls during the rest of the feeding period was similar between pens that did or did not have BVD PI animals. Retreatment rates were similar in calves from BVD PI-positive pens (17.8%) and calves not exposed to BVD PI animals (17.1%). Mortality rates were similar between pens with a BVD PI calf (1.6%) relative to pens without a BVD PI calf (1.9%).

Significance

These data indicate that testing and removing BVD PI animals at 12 to 18 days on feed results in higher morbidity rates relative to pens not exposed to BVD PI animals. Testing and removing BVD PI animals had no effect on retreatment or mortality rates in feeder cattle. The difference in morbidity rates between the BVD PI exposed and non-BVD PI exposed cattle was explained by the increase in pull rates during the first seven days on feed. These data do not support the testing and removing of BVD PI feeder calves as late as 12 to 18 days on feed. Further research is needed to examine if testing and removing BVD PI animals earlier in the feeding period is more effective in controlling morbidity rates in feeder cattle.