PERSISTENT BOVINE VIRAL DIARRHEA VIRUS INFECTION IN U.S. BEEF HERDS

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In the summer of 1996, we screened approximately 19,000 calves in 130 beef herds located in 5 states for persistent bovine viral diarrhea virus (BVDV) infection. The herds were located in Alabama, Ohio, Nebraska, Nevada, and North Dakota. Cooperating veterinarians in private practice were identified in each of the five states. The cooperating veterinarians identified 50 client beef herds in which they suspected BVDV infection based on history or observed clinical signs. In addition to the suspect herds, 80 herds were randomly selected from the beef herd client base of the cooperating veterinarians. Serum was collected from each calf in the study herds prior to 4 months of age and tested for the presence of BVDV by virus isolation. Information about each of the herds, including management practices, vaccination history, death losses, and calf growth performance were collected by the cooperating veterinarians using standardized questionnaires. We identified a total of 56 BVDV positive calves in 13 herds. At least one herd with BVDV positive calves was identified in each of the five states. Eleven of the herds with positive calves were BVDV suspect herds and the were randomly selected herds. Multiple BVDV positive calves were identified in 11 of the 13 herds with positive calves. A second serum sample was obtained at 6 months of age from 42 (75%) of the 56 initially positive calves. Thirty-two (76%) of the second samples were BVDV positive, confirming persistent infection (PI) status. The remaining 14 calves that were positive at initial screening were either known or presumed to be dead by the owners before 6 months of age. Calf mortality is one manifestation of persistent BVDV infection, suggesting that these 14 calves were also PI. A serum sample was obtained from the dam of 40 of the positive calves. Three of the dams (7.5%) on two farms were found to be BVDV positive. These data suggest that persistently infected BVDV calves can be an important means of maintaining BVDV infection in beef herds.