Control of Bovine Viral Diarrhea Virus in Ruminants

Submitted by Dan Van Arsdall on Mon, May 23 @ 10am

Bovine viral diarrhea virus (BVDV) is a diverse group of viruses responsible for causing disease in ruminants worldwide. Since the first description of BVDV as a cause of disease, it has undergone surges and lulls in importance. Epizootics of disease caused by BVDV are described. Although naming of the virus and illness implies gastrointestinal disease in cattle, BVDV is a pathogen that affects multiple organ systems in many animal species. Infection, disease, or both have been described in cattle, sheep, goats, pigs, bison, alpacas, llamas, and white-tailed deer, among others. In 2007, the Office of International Epizootics added bovine viral diarrhea to its list of reportable diseases, but the listing is as a reportable disease of cattle rather than as a reportable disease of multiple species. Although initial descriptions of disease caused by BVDV were of digestive disease, respiratory disease and reproductive losses because of BVDV are the most important economically. BVDV uses multiple strategies to ensure survival and successful propagation in mammalian hosts, and this includes suppression of the host’s immune system, transmission by various direct and indirect routes, and, perhaps most importantly, induction of persistently infected (PI) hosts that shed and transmit BVDV much more efficiently than non-PI animals. Successful control and eventual eradication of BVDV requires a multidimensional approach, involving vaccination, biosecurity, and identification of BVDV reservoirs. The following consensus statement reflects current knowledge and opinion regarding the virus, prevalence and host range, clinical manifestations, and most importantly, the control and potential for ultimate eradication of this important viral pathogen of ruminants.

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