

Bovine Herpesvirus and Update for Florida Producers  
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This is a repeat of an article which was published in 2009 in the Florida Cattlemen. Apparently some producers are experiencing problems associated with Bovine Herpes virus and a brief refresher may be beneficial.

The disease caused by bovine herpesvirus type 1, (BHV-1) was first recognized in the United States as an acute febrile highly contagious respiratory infection in cattle. The upper respiratory tract infection caused by this virus was named Infectious Bovine Rhinotracheitis (IBR). Other but less common forms of herpes viral infections in cattle are, the genital form of the disease in female's termed Infectious Pustular Vulvovaginitis (IPV) and the genital form in males termed Infectious Pustular Balanoposthitis (IPB). A third type of herpes viral infection is the encephalitic form that typically affects younger calves.

Infections caused by BHV-1 are described as an interplay between acute forms of infection followed by the establishment of latency in convalescent animals which then become carriers of the infection. The latent BHV-1 virus may be reactivated in response to different stimuli such as, calving, stress, infection with other agents, or treatments with dexamethasone. This reactivation of the latent infection occurs at different frequencies throughout the life of the animal. New outbreaks of disease within a herd may occur due to excretion of the virus from a latent carrier.

The infections caused by BHV-1 are manifested in a variety of clinical forms, respiratory tract infections, conjunctivitis, genital tract infections and abortions, central nervous system infections, and fatal generalized disease of neonatal calves. Respiratory tract infections are the most common form of the disease. These infections occur frequently in intensive production units such as feedyard's and backgrounding operations. Conjunctivitis may appear as a symptom associated with the respiratory form of the disease or it may be the only symptom present. Genital tract infections are more common in Europe and more often associated with dairy animals. Abortions due to this virus infecting pregnant animals occur around the last third of gestation. Calves which are infected in utero during late gestation or shortly after birth may suffer a fatal form of infection characterized by high fever, anorexia, depression, and respiratory distress.

The difference in response of the virus toward respiratory disease or genital infections is probably determined by differences in cattle production systems and animal densities. In areas where there is a high concentration of cattle such as a feedlot, the most important modes of transmission are probably air born and the most evident disease involves the respiratory system. In areas of lower cattle density, venereal transmission becomes more evident with genital disease occurring with more restricted transmission of the virus. The respiratory form of the disease is most common in North America while the genital form is more common in Europe. The encephalitic form of the disease appears to be more of a problem in Australia and South America and is sporadic in North America and Europe.

Treatment for this viral infection is focused at control of the secondary bacterial complications which involves administering antibiotics and supportive therapy. Husbandry of infected cattle should be directed toward minimizing stress, isolating sick animals, providing shelter and quality food and water.

Control of this disease within a herd is often based on the use of vaccines which have played a major role in the control of BHV-1 disease. Managing clean herds without the use of vaccinations requires extreme care in supervising the introduction of new animals into the herd and rigorous monitoring of the serologic status of the herd to prevent outbreaks. Bio security is a very important concept to prevent the introduction of the virus into a herd or it's dissemination throughout the herd if the virus has been established within a herd.

Vaccines available for use in beef cattle include attenuated modified live viral vaccines, inactivated or killed virus vaccines. Routs of administration include both parenteral and intranasal. Certain vaccines types are not recommended for use in pregnant animals. The parenteral BHV-1 vaccines are often used in combination with other viral vaccine agents.

Vaccination schedules vary according to the type of production and the producer's experience. General recommendations are, for calves, 2 immunizations prior to weaning provide good disease prevention and control while cows and heifers should have received a minimum of 2 immunizations prior to entering the breeding herd and then receive an annual booster for the remainder of their production history. Producers are encouraged to work with their herd veterinarian regarding this disease and its control. Its effects upon a herd could be devastating.