



Economics of Testing for BVDV PI Animals in the Stocker-Feedyard Industry

The BVD Education Project - a BVD continuing education brief by Dr. Bill Hessman, DVM

Bovine Viral Diarrhea Virus (BVDV) is arguably one of the most costly viral diseases we see in cattle worldwide. Animals that are persistently infected (PI) with BVDV are considered the major reservoir for continual transmission of the virus. PI animals are lifelong carriers and shedders of BVD virus. Besides causing severe intestinal infections, BVDV is also a leading cause of Bovine Respiratory Disease (BRD) both directly and indirectly through immune suppression.

In the cattle feeding industry, BRD is the leading cause of morbidity and mortality. The causes of this morbidity and mortality are many but BVDV is often involved. One study showed that exposure to BVD PI animals increased BRD sickness rate 43%. In the cattle feeding industry a PI animal exposes not only the pen mates but animals in adjacent pens to BVDV which in turn compromises the animal's immune system allowing common BRD pathogens to cause more harm. A 2007 study (Brooks) on costs associated with BRD showed that animals that did not receive any treatment for BRD returned on average \$111.12 more than animals that required multiple BRD treatments. Studies have also shown that the morbidity and mortality in the feeding industry continue to increase yearly.

The economic impact from PI animals exposing the population to BVD virus can be great. A study evaluating this impact in the feedyard showed a cost of \$67.49 to all animals exposed to PI animals. Most of the economic loss came from reduced performance (\$58.83) and an additional \$8.66 coming from increased mortality. This study was conducted in 2004-2005 so today's costs from this exposure would be much greater.

There are many studies that show vaccinating for BVD virus helps mitigate the costs associated with BVD virus. Because PI animals shed large volumes of BVD virus continually and lifelong, often times it appears that the vaccination did not help. The key in these instances is to remove the source of the exposure which is the PI animal. Testing for PI animals and removing on arrival is a management technique that can reduce the costs associated with BVD virus. Utilizing both testing and vaccination gives you the greatest chance of reducing the costs associated with BVD virus in the beef cattle industry.

There are several tests available today to detect animals that are PI with BVD virus. Costs for these tests range from approximately \$2.00 - \$5.00 per head depending on the laboratories testing methodology. Turnaround time for test results can be anywhere from 1 hour to several days depending on laboratories location. Obviously the quicker a PI can be identified and removed from the pen the greater the benefit. In a recent study (Grooms 2014) concluded that, "Prevention of exposure of feedlot cattle to PI cattle in conjunction with administration of an MLV BRD vaccine that included antigens for BVDV resulted in the lowest morbidity



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rate. Thus, identification and removal of PI cattle is an important management practice to help minimize the morbidity rate in feedlot cattle.”

With morbidity continually increasing annually in the backgrounding and feeder industries and calf prices at all-time highs, instituting a management program that includes testing for and removing PI animals along with proper vaccination makes more sense than ever.

The BVD Education Project - is a producer focused series of articles by Dr. Bill Hessman, DVM, Sublette Kansas, aimed at providing cattlemen with information that will allow them to protect their herds from the impact of Bovine Viral Diarrhea Virus (BVDV or BVD) and persistent infection (BVD-PI).