

Added Value through Biosecurity
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Adding value to your herd through specific disease free cattle

We can divide cattle diseases into two categories, those disease we can live with and those disease we can not afford to have in our herds. Those diseases we can live with are diseases that we have an effective vaccine to control and are not a food safety issue. Those diseases we can not live with are diseases that we have no good vaccine to help control the disease. If we could eliminate these diseases we would increase production and enhance food safety. The ideal situation would be to have breeders validated free of the diseases we can not live with so commercial producers would have a source of specific disease free bulls and replacement cows or heifers.

Back in the 1960's the pork industry was in dire straights because of disease problems. One answer to that dilemma was to produce breeding stock that was free of a number of important swine diseases. The program was called Specific Pathogen Free (SPF). The pigs were produced in a high biosecurity environment and the herd status was maintained by testing for the absence of disease. The program added value to SPF breeding stock.

Two specific cattle diseases have emerged that fall into the category of diseases we can not live with and remain a profitable beef industry. They are Bovine Virus Diarrhea persistent infection (BVD-PI) and Johne's disease.

BVD-PI is a viral infection that occurred during early gestation. BVD is a virus that has an affinity for the reproductive tract and has a unique ability to get into the uterus of a pregnant cow and infect the calf. If the infection occurs early in gestation it may result in a calf that will not develop an immune response to BVD and will shed enormous amounts of virus all of it's life. About 2% of all the calves born in the US are BVD-PI and about 0.25% live to weaning age. **That means that on the average 1 in 400 bulls sold will be BVD-PI and 1 in 400 heifers kept will be BVD-PI.** These BVD-PI cattle are usually in large numbers from a single farm and not spread over the entire population of cattle. Introduction of a BVD-PI animal into your herd may result in abortions, early fetal loss, repeat breeders, and even an outbreak of calf diarrhea.

Johne's disease is a chronic infection that results in persistent diarrhea that is not responsive to treatment with antibiotics or dewormers. It has been incriminated as a possible cause of Crohn's disease in humans and may be a food safety issue for our industry. In infected cattle herds it results in production losses, treatment costs and loss of genetics. The disease is acquired as a calf but remains dormant in cattle for 2 – 10 years. It is shed in the cattle manure and young calves are highly susceptible to infection even with good sanitation. According to a study done in Georgia in 1999, **the Georgia beef cattle industry has a low incidence of Johne's positive cattle and is in a good position to control the disease.**

Biosecurity associated with these two diseases is very different. Whenever we purchase new breeding stock and bring it onto our farms the newly arrived cattle should be isolated, blood tested for BVD-PI and Johne's disease and vaccinated with the products you use on your cows. The blood test for BVD-PI is highly sensitive and we should be able to determine from that test if we have a BVD-PI problem with the newly

purchase animal. A single blood test for Johne's disease is not as reliable. The blood test should be positive if the animal is shedding infection but if the bacteria are dormant in the cells then the test may not be accurate. A voluntary program of Johne's certification is in the planning stages for Georgia. Once this program is in place you will be able to purchase breeding stock from sources that have tested their entire herd and are more confident that they are free of Johne's disease.

There are currently several purebred beef seed stock producers in Georgia that have tested their herds for BVD-PI and Johne's disease. I think we will see more validation of disease free status in the future and it will help our industry remain healthy.