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Bovine Anaplasmosis

Late summer and fall is the time of year when Anaplasmosis can rear its ugly head in beef cattle herds. At the Ranch Management Field days in August, Dr. Kathryn Reif, Department of Diagnostic Medicine/Pathobiology, K-State College of Veterinary Medicine, gave an update on the prevalence, impact and control of Bovine Anaplasmosis. A survey of Kansas herds showed about 50 percent of herds in Kansas are infected with *Anaplasma marginale*. In our corner of the state the incidence rate goes up to closer to 75 percent. Knowledge of this disease can help with herd management and hopefully reduce the impact of Anaplasmosis to the beef cattle industry.

Anaplasmosis is a substantial drain to profitability in beef production. Industry estimates conservatively place this value at \$300 million per year. Production losses stem from; death, weight loss, abortions and input cost associated with treatment and prevention. This is not a human health concern and generally is considered to be a chronic disease in most infected herds, in animals over two years of age.

Anaplasma marginale is a bacterium which lives in the red blood cells of infected animals. Once an animal becomes infected, the body's immune system recognizes the abnormal red blood cells and removes the infected cells from the body. When the normal creation of new red blood cells can't keep up with the loss of the infected ones, the animal becomes anemic. The loss of red blood cells leads to a decrease oxygen carrying ability, which results in clinical signs of disease. It takes about a month from time of infection to clinical disease but the range is 6-70 days.

Ticks are the primary vector, as the bacteria can replicate in ticks and as they bite cattle, transmit the disease. Biting flies and blood-contaminated instruments can also transfer *A. marginale* infected blood. Thus, proper insect control measures, good equipment sanitation and changing needles between animals, all aid in suppressing the spread of Anaplasmosis. Managing the external parasites mentioned, should always be a top priority for control measures.

The clinical signs include; depression, anorexia, unusual aggression, loss of coordination or pale/yellow mucous membranes. Proper handling of a clinical animal is critical, because the loss of oxygen in the blood cause animals to become agitated, aggressive and even die if forced to overexert. Early detection is key to successful treatment protocols. Unfortunately, especially true in older animals, the first indication of an Anaplasmosis outbreak is dead cows. Testing options are available, especially to find carrier animals with antibodies that are not yet clinical.

As with any animal disease issue, my recommendation is to visit with your herd veterinarian for treatment and control measures. Enrofloxacin (Baytril 100-CA1) is a prescription medication that can be used with FDA conditional approval for use. Many veterinarians recommend the use of feed-based chlortetracycline to help control this disease. Feed-based use of antimicrobials falls under the Veterinary Feed Directive, as discussed last week. There is not a fully USDA licensed vaccine on the market, but experimental vaccines are being developed and tested.

Producers should be aware of symptoms of anaplasmosis to identify the issue as soon as possible if it occurs. If anaplasmosis is confirmed in a herd, your veterinarian can help develop a plan appropriate to the situation within your herd. More information can be found in the K-State Beef Tips article: <https://enewsletters.k-state.edu/beeftips/2020/09/01/dealing-with-anaplasmosis/>