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Anemic Summer Cattle

In following the KDA motivation from last week, *Theileria orientalis* updates have a bit of a shock value to those unfamiliar with the disease. This is the time of year when anaplasmosis can rear its ugly head as well. Today we will look at these two diseases which both cause anemia and potentially death in cattle and other ruminant animals.

While *Theileria orientalis* Ikeda (*Theileria*) and *Anaplasma marginale* (anaplasmosis) both infect red blood cells, cause their breakdown which leads to anemia/similar symptoms; they have different causative organisms. *Theileria* is a protozoal organism and anaplasmosis is bacterial, both of which are transmitted by blood feeding parasites like ticks, biting flies, mosquitoes and lice. Mechanical transmission with blood contamination on equipment such as needles, dehorning, castration and tagging equipment is possible too.

Symptoms include elevated temperature, depression, increased respiration, weight loss, pale and/or jaundice mucous membranes around the eyes and vulva. Pregnant animals may abort and death of the animal is possible, especially in situations causing stress and increased activity. Two key differences can be noted. The first and most notable is that *Theileria* can be found in any age of animal and anaplasmosis is typically found in older cattle. *Theileria* infected animals often are not as aggressive as anaplasmosis symptomatic animals.

The disease stages begin with incubation, progress to clinical expression and then animals enter a carrier status. Incubation period ranges from one to eight weeks. By the time clinical disease symptoms express themselves, it is likely that a large percentage of the herd will have exposure. Some animals may become severely clinical, while others may have no expression of the disease. Animals who do not succumb to the infection will become life-long carriers, rarely developing clinical disease again.

Treatment is very different between these anemia causing diseases. Unfortunately, there is no approved treatments or vaccines for *Theileria*, as it is a protozoan. Anaplasmosis can be treated with oxytetracycline injections and/or oral products. There has been some work done with experimental anaplasmosis vaccines, but they are not readily available. Prevention becomes the best option and includes management practices to prevent the transmission of blood between animals.

The Asian longhorned tick is the major player in *Theileria*, which has been confirmed in Kansas. However, it appears that most of the current infections in Kansas come from importation of infected animals from states that have well established populations of *Theileria* infected cattle. The use of Integrated Pest Management (IPM) practices to control insect and tick pressure is key. Pasture management using fire, brush control and rotational grazing can help reduce tick presence as well. Changing needles and disinfecting blood contaminated equipment between animals is another prevention tactic.

As is always the case with animal health related issues, work with your herd health veterinarian to develop a plan for your herd and situation. K-State has an excellent publication in the online bookstore entitled [“Anaplasmosis” MF-2212](#) and the University of Missouri has one entitled [“*Theileria orientalis*: An Emerging Cattle Disease in Missouri” G2113](#) to learn more.