

VETERINARY CALL

by Bob Larson, Kansas State University

Anaplasmosis

Anaplasmosis is a serious disease that affects cattle in an increasingly larger area of the country.

A tiny organism called *Anaplasma marginale* attaches to red blood cells, which leads to destruction of those cells and a decrease in the ability of affected cattle to carry oxygen in their blood.

If more red blood cells are destroyed than the animal can replace, the blood becomes watery; the animal becomes anemic; and other signs of infection can occur, such as yellow discoloration of the mucus membranes, fever, depression, dehydration, and rapid or difficult breathing. Sometimes affected animals become excited and aggressive when not enough oxygen reaches the brain.

Young animals are often able to recover because they can make new red blood cells very quickly. Older animals, however, do not produce new cells quickly, and they can become anemic and have low oxygen levels in the blood leading to severe illness or death.

Anaplasmosis is primarily carried from animal to animal by ticks, although the movement of blood from infected to susceptible cattle can also be accomplished by some insects or by human tools such as blood-contaminated needles, dehorning instruments, tattoo pliers or palpation sleeves. The disease has historically been a problem in the southern parts of the United States, but has now spread farther north.

In herds exposed to the organism, cattle of any age can be infected, but the severity of illness is usually mild in young cattle. In cattle infected when they are three years or older, severe illness and death are fairly common. If infected cattle survive, they will remain infected, but they are not likely to have severe effects of the infection in the future.

The first sign of anaplasmosis in a herd may be the sudden death of adult cattle. If anaplasmosis is identified as a cause of death and disease in a herd, cattle that are obviously sick should be kept as quiet as possible and treated with an appropriate antibiotic. In addition, your veterinarian can help you determine the best strategy to protect the rest of the herd from severe disease, which will depend greatly on a farm or ranch's geographic location and the number of infected cattle in the area.

In parts of the country where anaplasmosis infection is rare, a strategy to find and treat and/or remove any carrier animals is recommended. In contrast, in areas of the country where many cattle are infected, an attempt to remove all carriers from a herd will result in a herd that is susceptible to re-infection and a return of serious health effects.

Similarly, if your herd is free of anaplasmosis and the risk of exposure is low, any replacement animal should be tested before being brought into contact with the herd. In contrast, if your herd is infected with anaplasmosis and the organism is common in your area, the greatest health risk is in replacement animals that are not infected with the organism.

Anaplasmosis control requires a good working relationship with your veterinarian to determine your level of risk and best control strategies. The best control strategy for your herd may be very different from that of your neighbors' or cattlemen in other parts of the country. **AJ**

Editor's note: Robert L. Larson is a professor of production medicine and executive director of Veterinary Medicine Continuing Education at Kansas State University.

