

Vet Call

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Controlling anaplasmosis

Anaplasmosis is a disease of cattle that has historically been a problem in the southern parts of the United States. Reports of cattle affected by the disease have gradually spread north so that now, cattlemen in many important beef-producing areas need to be aware of this problem.

The disease is caused by a parasite that attaches to red blood cells which causes the animals body to destroy the cell. If enough red blood cells are destroyed, anemia can result. Blood samples taken from affected animals appear to be watery. Other signs of infection include: fever, depression, dehydration and rapid or difficult breathing. Sometimes affected animals become excited and aggressive when not enough oxygen reaches the brain.

Cattle of any age can become infected, but the severity of illness increases with age. In cattle that are three years of age or older, the death rate is 30 to 50 percent in animals that display clinical signs. If infected cattle are able to survive, they remain as carriers for the rest of their life— unless they are treated to specifically remove the organisms.

Anaplasmosis is primarily spread from animal to animal by insects that take large blood meals, such as ticks and horseflies. Other biting insects such as stable flies and mosquitoes can also transmit the disease, as can human activities such as dehorning, tattooing or vaccinating which could transfer the blood of an infected animal to another individual. The spread of anaplasmosis in an infected herd can be slowed by the use of insecticides and by rinsing all instruments between animals.

In herds where anaplasmosis has been diagnosed in the past, or if the herd is at-risk because near-by herds are affected, the disease can be controlled in several ways:

1. Test the herd and separate carriers from non-carriers.

Carrier animals will not show symptoms of the disease, but susceptible animals must be protected by isolating them from

carriers. Interstate movement of carrier animals is prohibited by most states.

2. Test the herd and eliminate the carriers with tetracycline treatment.

Oxytetracycline can be administered by injection at a dose of 9 milligrams (mg) per pound of body weight every three days for a total of four treatments.

Tetracyclines can also be administered orally in the feed. Chlortetracycline can be fed at 5 mg per pound of body weight daily for 60 days to clear the carrier state. This dose may cause diarrhea, anorexia and weight loss for several days and is not cleared for use in the United States.

Chlortetracycline can also be fed at .5 mg per pound of body weight for 120 days. This dosage is cleared by the Food and Drug Administration (FDA).

Programs to eliminate the carrier state should be conducted after the fly and tick season has ended. Six months after the carrier elimination treatment, the cattle should be tested and if a positive is found, she should be considered a treatment failure and separated from the herd.

Animals that have been cleared of the carrier state are now susceptible to reinfection, but exhibit resistance to the disease for as long as 30 months.

3. Vaccinate the herd for anaplasmosis.

A vaccinated animal is still capable of becoming infected with anaplasmosis and acting as a carrier. The vaccine does not prevent infection, but does aid in reducing or preventing symptoms.

4. Inject oxytetracycline every 21 to 28 days.

Begin treatment at the start of the fly season and continue until one to two months after fly season.

Because of the life cycle of the anaplasmosis organism, its very important that injections fall at 21 to 28 day intervals.

5. Feed chlortetracycline daily during the fly and tick season at the dosage of .5 mg per pound of body weight.
6. Feed chlortetracycline daily all year at the low dosage of .25 mg per pound of body weight.

This dosage only protects against the symptoms of anaplasmosis, and the animal can still become infected and be a carrier.

Bulls are very susceptible to anaplasmosis, probably because of the increased fly burden they carry compared to cows. Bulls also do not consume enough oral chlortetracycline to protect themselves, so in at-risk herds, the bulls must be treated by injection at 21 - to -28-day intervals.

If an outbreak of anaplasmosis occurs where cows are showing signs of the disease, producers should take the following steps:

1. Treat animals showing symptoms with tetracycline antibiotics.
2. Move healthy animals away from clinically affected animals because animals showing symptoms of the disease are very contagious.
3. Move affected animals very quietly because the animal may die if it becomes excited.
4. Protect the animals not showing signs by injecting or feeding tetracycline antibiotics.

Because of the number of options available and the advantages and disadvantages of each option, producers who have had anaplasmosis diagnosed on their farm or are at risk due to close proximity of infected herds, should work closely with their veterinarian to determine the best control or treatment for their given situation.

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