**Anaplasmosis:**

An infectious disease of cattle that causes destruction of red blood cells. The disease is caused by a minute parasite, Anaplasma marginale, found in the red blood cells of infected cattle. It can be transmitted from infected animals to healthy animals by insects or by surgical instruments.

**Developmental Stage**

During the developmental stage, which normally lasts from 4 to 9 days, most of the characteristic signs of anaplasmosis appear. Clinical signs begin to be expressed about halfway through this phase. As the infected animal’s body destroys the parasite, RBCs are destroyed as well. When a substantial loss of RBCs has occurred, the animal will show signs of clinical anemia. The body temperature will commonly rise to 104 o to 107 o F (40 o to 41 o C), and a rapid decrease in milk production will occur in lactating cows. Cattle producers first notice the anemic, anaplasmosis-infected animal when it becomes weak and lags behind the herd. It refuses to eat or drink water. The skin becomes pale around the eyes and on the muzzle, lips, and teats. Later, the animal may show constipation, excitement, rapid weight loss, and yellow tinged skin. The animal may fall or lie down and be unable to rise. Affected cattle either die or begin a recovery 1 to 4 days after the first signs of the disease. As a general rule, unless infected cattle can be detected during the early developmental stage, they should not be treated. There are two primary reasons for this practice. First, if the animal is forced to move or becomes excited, it may die of anoxia (lack of oxygen in the animal’s system). Second, antibiotic treatments do little or nothing to affect the outcome of the disease when given during the late developmental or convalescent stage

**Convalescent Stage**

Cattle that survive the clinical disease lose weight, abort calves, and recover slowly over a 2- or 3-month period. This is known as the convalescent stage, which lasts until normal blood values return. This stage is differentiated from the developmental stage by an increase in the production of RBCs (erythropoiesis) in the peripheral blood, shown in an increase in hemoglobin levels and high total white blood cell counts, among other characteristics. Death losses normally occur during the late developmental stage or early convalescent stage. Cattle of all ages may become infected with anaplasmosis, but the severity of illness increases with age. Calves under 6 months of age seldom show enough signs to indicate that they are infected. Cattle 6 months to 3 years of age become increasingly ill, and more deaths occur with advancing age. After 3 years of age, 30 to 50 percent of cattle with clinical anaplasmosis die if untreated.

**Carrier Stage**

Unless adequately medicated, cattle that recover from anaplasmosis remain reservoirs (carriers) of the disease for the rest of their lives. During the carrier stage, an animal will not exhibit any clinical signs associated with the persistent low-level A. marginale infection. Nevertheless, the blood from these recovered animals will cause anaplasmosis if introduced into susceptible cattle. Carriers very rarely become ill with anaplasmosis a second time. Unidentified carriers in a herd are the most likely source of infection for future outbreaks of the disease.

**Eliminating The Carrier State**-Anaplasmosis carrier cattle may be cured of the infection by treatment with certain tetracycline antibiotics

**Antibiotic Treatment Regimens For Anaplasmosis Management**.

**Use & Drug Route Dose (mg/lb. BW) Frequency of Treatment**

**Prevention**

Chlortetracycline(Aureomycin) Oral 0.10-0.25 Daily Year-Round

Chlortetracycline Oral 0.5 Daily During Vector Season

Oxytetracycline (50-100 mg/ml) IV/IM 3-5 Every 28 days During Vector Season

Oxytetracycline (LA-200) IM 9 Every 28 days During Vector Season

Carrier Elimination

Chlortetracycline Oral 0.50 Daily for 120 days

Chlortetracycline Oral 5.0 Daily for 60 days

Oxytet(LA-100) (50-100 mg/ml) IV/IM 5.0 Daily for 10 days

Oxytet (50-100 mg/ml) IV/IM 10.0 Daily for 5 days

Oxytet (LA-200) IM 9.0 4 RX at 3 day intervals

**Treatment Of Sick Animals**

Oxytetracycline (50-100 mg/ml) IM 5.0 Usually one treatment

Oxytetracycline (LA-200) IM 9.0 One treatment

**Temporary Protection During Outbreaks**

Oxytetracycline (50-100 mg/ml) IM 5.0 One treatment

Oxytetracycline (LA-200) IM 9.0 One treatment

**Prolonged Protection During Outbreaks**

Oxytetracycline (50-100 mg/ml) IM 5.0 Every 28 Days During Vector Season

Oxytetracycline (LA-200) IM 9.0 Every 28 Days During Vector Season

Chlortetracycline Oral 0.50 Daily for 60 days

Note: Vaccine is used to stimulate prolonged resistance; however, until the resistance is established, OTC injections should be used simultaneously with each dose of vaccine to temporarily reduce the A. marginale challenge.

Key: IV = intravenous; IM = intramuscular.