

Anaplasmosis Treatment and Control

Richard C. Searl, D.V.M.

Director of Professional Services

Fort Dodge Laboratories, Fort Dodge, Iowa 50501

Editor's Note: Veterinarians and livestock owners often request information on how to handle an outbreak of anaplasmosis. Dr. Searl prepared this information as the result of numerous enquires.

Anaplasmosis may be expected to occur annually during the vector season in those states and areas where the disease is known to be endemic. Recovered animals remain as infected carriers and are a source of infection to others. The movement of carriers frequently causes serious disease outbreaks in areas where veterinarians and producers may not be familiar with the disease.

Recognition

Early recognition of the disease and prompt action are necessary to minimize losses. *Anaplasma marginale* produces a hemolytic anemia with the occurrence and severity of infection increasing with the increasing age of animals infected. Animals of all ages are susceptible but clinical cases are not usually observed in animals under a year of age and symptoms are often mild in those under two years of age.

Often the first sign of a problem is the finding of a dead animal. The affected animal is usually an older cow or the herd bull. Developing cases may be first noted by detecting a weakened animal which separates itself from the herd or lags behind when the herd moves from the pasture to the improvements.

As anemia develops, the eyes, mucous membranes, udder and non-pigmented skin appear pale and anemic. Respiratory and heart rates increase and evidence of constipation is often present. As the disease progresses the anemia changes to icterus with an increase in previous symptoms. Irritability or mania may develop as a result of cerebral anoxia. The blood is thin and watery and red cell marginal bodies are detectable in stained smears of blood.

Animals dead of anaplasmosis bloat rapidly, are usually found near ponds, in secluded areas or under shade trees and the legs are extended from the carcass. The udder and skin have a yellow color. Internal tissues are markedly icteric with yellow or blood tinged fluid in the peritoneal and thoracic cavities. The spleen is enlarged and friable with a raspberry jam internal consistency.

Treatment

Objectives of treatment are to save clinical cases, prevent incubating and developing cases and provide continued protection to the herd. These objectives may be accomplished with the simultaneous use of broad spectrum antibiotics and Anaplaz[®] vaccine. In clinically ill animals tetracycline, as Liquamycin[®] or LA-200[®] is to be given at the rate of 5 mg./lb. bodyweight daily. LA-200, a repositol form of tetracycline, is often given at the rate of 9 mg./lb. bodyweight two times at 48 hour intervals. **It is important to handle sick animals quietly with little restraint or stress as extra oxygen requirements may result in immediate death.**

On a herd basis all animals over a year of age should receive a simultaneous injection of tetracycline as LA-200 (9.9 mg./lb. bodyweight) and a dose of Anaplaz vaccine. In 28 days the above procedure is repeated. This will usually stop the outbreak, prevent the development of new cases and provide continued protection. Since the vaccine Anaplaz has the potential to produce N.I. in offspring of vaccinates, the risks and benefits of its use need to be considered. To negate or minimize the risks of N.I., it is recommended that breeding females open or in the first four months of pregnancy receive antibiotic and vaccine as above noted. Those in the 5th or 6th month of pregnancy should receive antibiotics but only the first dose of Anaplaz and those in the last trimester of pregnancy should receive antibiotics but no Anaplaz. After calving those receiving only a single dose of Anaplaz may receive the second dose and those not vaccinated receive two doses four weeks apart. Some practitioners have omitted the second dose of tetracycline by placing the herd on .5 mg./lb. bodyweight chlortetracycline in the feed or salt at the time of first antibiotic injection and continuing it until two weeks after the second Anaplaz injection. Bulls may be vaccinated at any time.

To maintain herd protection, give a single dose of Anaplaz the next year after calving while the cow is open. This will then provide practical herd protection for an additional two years from that date. Since injections in late pregnancy or multiple repeated injections of Anaplaz increase the risks of N.I., it is recommended no more than the three injections of Anaplaz be given to an animal unless those so vaccinated are showing illness or deaths occur due to anaplasmosis.