



Cattle Producer's Handbook

Animal Health Section

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Bovine Anaplasmosis

J. L. Zaugg, D.V.M., Caine Veterinary Teaching Center
University of Idaho

Anaplasmosis, also known as yellow bag or yellow fever, is an infectious parasitic disease of cattle caused by the microorganism *Anaplasma marginale*. This parasite infects the red blood cells and causes severe anemia, weakness, fever, lack of appetite, depression, constipation, decreased milk production, jaundice, abortion, and sometimes death. The incubation time for the disease to develop varies from two weeks to over three months but averages three to four weeks.

Adult cattle are more susceptible to infection than calves. The disease is generally mild in calves under a year of age, rarely fatal in cattle up to two years of age, sometimes fatal in animals up to three years of age, and often fatal in older cattle.

Once an animal recovers from infection, either naturally or with normal therapy, it will usually remain a carrier of the disease for life. Carriers show no sign of the disease but act as sources of infection for other susceptible cattle. Occasionally, however, some animals will spontaneously clear themselves completely of the infection and become as susceptible to the disease as they were originally.

Importance

Some 40,000 animals die annually in the western states from anaplasmosis. Death and financial losses associated with abortions, weight loss, and milk reduction in surviving animals, and the cost of treatment and prevention, make anaplasmosis second only to brucellosis in importance to the cattle industry.

Distribution

Anaplasmosis occurs in most parts of the world. It is recognized in 40 of the 50 United States and is particularly important in the gulf coast and western states. The most recent complete disease prevalence survey in

the West was conducted in Idaho. In that study, nearly 13 percent of the cattle sampled tested positive for anaplasmosis encounters. Because of the principal means of disease transmission, cattle maintained under range conditions are at greater risk of disease exposure than those on irrigated pasture or in drylots.

Disease Transmission

Anaplasmosis is spread primarily by ticks and insects and by man through careless use of instruments. The infection is also infrequently passed from an infected cow to her unborn calf. Although colostrum ingestion and absorption is essential for new calves, colostrum antibodies do not increase the natural resistance calves have against the disease.

The Rocky Mountain wood tick (*Dermacentor andersoni*) is the most common tick vector in the spread of anaplasmosis. Other ticks can also be involved, however. Horseflies, deerflies, and mosquitoes can also carry small quantities of blood from infected animals to susceptible ones. Some horseflies are known to have carried infective blood a distance of two miles to infect other animals when they took another blood meal.

Because of the importance of ticks and insects in anaplasmosis transmission, most new disease cases are seen in late spring and early summer. However, disease transmission has been recorded in cattle under desert mountain range conditions every month of the year. Therefore, anaplasmosis should be suspected when animals are anemic regardless of the season.

Anything capable of transferring small quantities of blood between animals can effect disease transmission. Castration, ear tagging, dehorning, tattooing instruments, and vaccination needles, without proper sterilization, easily spread the disease within a herd.