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TEM in Weaner Calves

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TEM — thromboembolic meningoencephalitis, also called TEME and Brainer — is a severe disease that affects the brain of weaner range and feedlot cattle. It is caused by the bacteria *Haemophilus somnus*, an organism that also can cause pneumonia and arthritis in cattle.

The disease is widespread in the western United States. It usually occurs during the colder fall, winter and spring months since factors such as stress associated with weaning, shipping and handling often tend to precipitate outbreaks. Cattle 6 months to 2 years old are susceptible. However, weaners and yearlings tend to be more susceptible.

Clinical Signs of Disease

In the feedlot, affected cattle are commonly referred to as "brainers" because most signs are the result of central nervous system disturbances. The condition is usually rapid in onset. The victim may be found dead or unable to rise, with no previous signs of illness. In cases where the disease progresses less rapidly, abnormal postures and gait are noticeable. The animal may act stiff or lame and exhibit posterior incoordination or weakness. Occasionally, periodic convulsions occur. Once an animal goes down it usually dies in a few days. Depression in down animals is the rule and many cases are comatose. If alert, TEM cases are aware of their surroundings but are helpless.

Early in the course of the disease, affected animals will have temperatures of 105 to 107° F. However, these temperatures often return to the normal range as the condition progresses. Positive diagnosis of TEM requires the removal of the brain by a veterinarian. TEM can be easily confused with listeriosis, polio and shipping fever.

Treatment

Successful treatment requires early recognition of disease. Individual cases respond to high levels of antibiotics, particularly oxytetracycline. Even under the best of conditions, however, a 50% recovery rate is considered good for this disease. In heavy outbreaks, adding high levels of either oxytetracycline or chlortetracycline in crumbles in the ration will help to reduce the incidence.

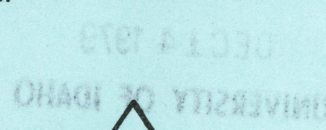
Prevention

A vaccine composed of killed *Haemophilus somnus* bacteria is available for prevention of TEM. Two inoculations are required with at least a 21-day interval between inoculations. Annual revaccination is necessary. It is best to vaccinate weaners at weaning time or at the beginning of the feeding period. The vaccine is not effective in the face of an outbreak.

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Auttis M. Mullins

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Dean, College of Agriculture
University of Idaho



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