

Information Sheet

January 2024

Bovine Theileriosis



- A diagnostic test is required to confirm the presence of the parasite. PCR may be the most specific test, but IFA and ELISA may also be used.
- *T. orientalis* Ikeda infections have been reported to cause mortality in an average of 1- 5% of infected cattle but can be as high as 50%. Pregnant heifers and calves are particularly susceptible to the infection. Once infected, cattle can be lifetime carriers.
- There is no approved treatment for bovine theileriosis currently in the United States.
- *Theileria* are not known to be human pathogens.

What is bovine theileriosis?

- Bovine theileriosis is caused by *Theileria orientalis*. This is a blood-borne parasite (protozoan) that can infect wild and domestic animals including cattle, sheep, water buffalo, yak, and other bovids.
- There are several types of *T. orientalis* found in the United States. However, to date, only *T. orientalis* Ikeda has been shown to cause severe illness in animals.
- *T. orientalis* is transmitted by ticks, primarily the Asian longhorned tick (*Haemaphysalis longicornis* - ALHT). Transmission may also occur through re-use of needles, or during transfusions.
- Signs of infection include weakness, fever, reluctance to walk, loss of appetite, difficulty breathing, reduced milk production, foamy nasal discharge, and abortion.
- Symptoms, such as anemia, may cause mucous membranes to turn yellowish or pale in color. Signs and symptoms may mimic bovine anaplasmosis.

Distribution of bovine theileriosis

- Throughout the world, bovine theileriosis is found in tropical and subtropical areas. In these areas, it can be a major constraint to cattle production.
- In the United States, bovine theileriosis caused by *T. orientalis* Ikeda has been found in 15 states: New York, Pennsylvania, Maryland, West Virginia, Ohio, Indiana, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Alabama, Missouri, Kansas, and Nebraska

Pasture Management and Tick Control

Control

You can help control the spread of bovine theileriosis by:

- Modifying tick habitat - keep grasses cut short and remove weeds and brush from grazing areas.
- Restricting cattle from grazing in heavily tick-infested pastures to reduce tick exposure.



- Routinely using Environmental Protection Agency (EPA) approved insecticide treatments (products that kill ticks) on animals, vegetation, and equipment. Use Food and Drug Administration (FDA) approved drugs for tick management on animals.
- Regularly inspecting cattle for ticks. Ticks can be found especially in the ears, under the tail area, between the hind legs, and in udder skin folds.
- Closely checking the health and tick status of all animals before and after herd introduction.

Biosecurity practices

- Protect yourself from ticks by using insect repellents containing DEET, picaridin, IR3535, oil of lemon eucalyptus, para-menthane diol, or 2-undecanone.
- When handling livestock, do not use farm medical instruments like needles on multiple animals. Thoroughly clean and sanitize tools and devices before and after use on each animal.
- Clean, treat, and sanitize equipment before moving off tick infested premises.
- If you suspect *Theileria* infection, experience livestock losses, or observe other conditions such as signs of anemia report these to a local veterinarian immediately.

Report Suspicious Cases

Suspect cases should be reported to your State Animal Health Official.

For more information, contact:

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