



CATTLE FEVER TICKS

FACT SHEET

WHAT ARE CATTLE FEVER TICKS?

Cattle fever ticks, known scientifically as *Rhipicephalus (Boophilus) annulatus* and *R. (B.) microplus*, are the most dangerous cattle ectoparasites in the United States. Fever ticks are capable of carrying and spreading the protozoa, or microscopic parasites, *Babesia bovis* and *B. bigemina*, to cattle causing bovine babesiosis, commonly known as cattle fever.



BOVINE BABESIOSIS

Babesia bovis attacks and destroys cattle's red blood cells, causing acute anemia, high fever, and enlargement of the spleen and liver, ultimately resulting in death for up to 90 percent of susceptible naive (no exposure to Babesia) cattle.

DISEASE TRANSMISSION

Cattle fever ticks are known to attach to a variety of species such as cattle, horses, white-tailed deer and exotic hoof stock such as nilgai antelope and red deer. These animals all serve as vectors in the spread of cattle fever ticks.

Cattle fever ticks become infected with babesia when they consume blood from infected cattle. When the tick reproduces, babesia will pass on to its larvae. The fever tick larvae will then pass babesia to the animals on which they attach.

FEVER TICK LIFE CYCLE

Cattle fever ticks go through three life stages while on an animal host: Larva, nymph, and adult. Female fever ticks will stay on one animal for the duration of their life. After female fever ticks are fully engorged they will drop off of the animal and lay up to 4,000 eggs on the ground. The eggs will hatch into larvae, which will attach to animals that walk by, and the life cycle continues.

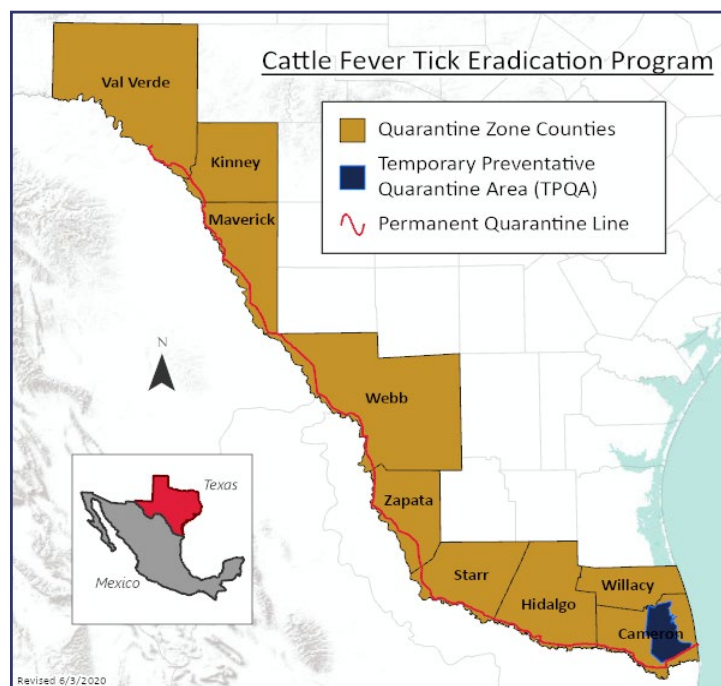
ERADICATION EFFORTS

The Texas Animal Health Commission (TAHC) has been fighting the spread of this pest since 1893. The U.S. Department of Agriculture's (USDA) Cattle Fever Tick Eradication Program was later established and partnered in our efforts.

FEVER TICK QUARANTINE AREA

The Permanent Quarantine "Buffer" Zone, also known as the Systematic Area, serves as the buffer between Texas and Mexico where fever ticks are endemic. The zone consists of over a half million acres, stretching from the Gulf of Mexico to Amistad Dam north of Del Rio, Texas. In the buffer zone, fever ticks are quickly detected and eliminated, in an effort to limit the spread of fever ticks into the free area of the state. The USDA leads the tick eradication effort along the Texas-Mexico border by prescribed treatment and inspection of U.S. cattle within the zone, and personnel ride along the river looking for stray livestock that may have crossed the Rio Grande River, as they are likely infested with ticks. Wildlife move freely across the border and they are capable of carrying ticks into the Systematic Area.

When fever ticks are discovered outside of the Permanent Quarantine Zone, the TAHC leads eradication efforts. Premises where fever ticks are discovered are quarantined and subjected to movement restrictions, inspections, and treatment prescribed by our regulations found in Chapter 41 of Title 4, Part 2 of the Texas Administrative Code, <http://www.tahc.texas.gov/reg/code.html>.





TREATMENT METHODS

If cattle fever ticks are found on an animal on a premises a TAHC representative will create a plan to most effectively and efficiently rid your premises of fever ticks. The options include but are not limited to:

Option 1: Injectable Doramectin

The first option for treatment is a ready-to-use injectable. Doramectin is given on a 25 to 28 day schedule for the 6 to 9 month quarantine period. This treatment option has been proven to be effective against fever ticks. It also relieves the stress of dipping and/or moving cattle from a premises, and reduces the number of times that cattle must be gathered during the quarantine period, resulting in substantial cost savings for a cattle owner when compared to a routine dipping schedule. It is important to note that Doramectin products have a pre-slaughter withdrawal period.

Option 2: Scheduled Dipping

The second option is a prescribed schedule of dipping the cattle on the premises every 7 to 14 days for 6 to 9 months. The dipping schedule is based on the fever tick's life cycle. The cattle from a quarantined pasture are treated in a spray-dip machine on the premises or hauled to an authorized dipping vat, where they are treated under the supervision of a TAHC or USDA inspector, who must certify that 100 percent of the herd was treated. The animals are returned to their pasture, where more ticks will attach to the animal before the next scheduled dipping. This procedure is repeated again and again to "clean" the pasture of ticks during the minimum 6 to 9 month quarantine period.

Option 3: Vacating Premises

The third option for eliminating the fever tick operates on the principal of "starving out" the tick, by removing the hosts. This approach, known as "vacating" the premises, is the least favorable because wildlife may harbor the tick and make eradication impossible. This option begins with dipping the cattle on a 7 to 14 day schedule. The cattle must have two consecutive tick-free inspections and dippings before the herd can be moved to a new, tick-free pasture. The tick-infested pasture is then left empty, or vacated, for nine months. Although vacating the premises of all livestock is often less expensive for the landowner, it is much less effective in eradicating fever ticks due to free-ranging deer and exotics. White-tailed deer, nilgai, and other wildlife that can carry the fever tick must be treated by approved methods during the period in which the pasture is left vacant to reduce the perpetuation of the tick. Currently, there is no effective treatment for use on nilgai antelope.

WILDLIFE TREATMENT METHODS

Treating free-ranging wildlife or exotic animal hosts for fever ticks poses a particular challenge. These animals cannot be gathered like livestock in order to be treated with a TAHC approved acaricide. Treatment is currently limited to feeding Ivermectin treated corn or the use of four-poster feeders with Permethrin infused rubbing posts. Ivermectin treated corn has been approved to feed to white-tailed deer by the Food and Drug Administration and can only be done legally by USDA and TAHC personnel. All Ivermectin treated corn must be withdrawn no later than 60 days before the start of hunting season. White-tailed deer or exotics maintained in pens can be treated as cattle would be or by approved wildlife treatment options. Currently, there is no effective treatment for cattle fever ticks on nilgai antelope.

REPORT SUSPECTED TICKS

Producers that observe ticks in their herd should contact their private veterinarian or local [TAHC region office](#). The ticks should be collected from the animal(s) and submitted for verification and identification. For more information about tick submissions visit <https://tvmdl.tamu.edu/tests/parasite-id-common-gross-identification/>.

FEVER TICK HISTORY

The fever tick has been a threat to American agriculture for generations due to its ability to spread disease. Cattle fever caused enormous economic losses to the U.S. cattle industry in the late 1800s and early 1900s.

Due to a substantial fever tick outbreak in 1893, the Texas Legislature created the Livestock Sanitary Commission, now known as the Texas Animal Health Commission (TAHC). Then, the agency's primary mission was to eradicate the Texas cattle fever tick. Since that time, the fever tick has been pushed back to the Texas-Mexico border with occasional outbreaks outside the buffer zone.

HELPFUL RESOURCES

For more information on fever ticks and Texas situational reports, maps, and contact information visit https://www.tahc.texas.gov/animal_health/feverticks-pests/.