Veterinary Services

Pest Alert

Cattle Fever Ticks and Cattle Fever

Cattle fever ticks—*Rhipicephalus (Boophilus) annulatus and R. (B.) microplus*—are the most dangerous cattle ectoparasites in the United States. These ticks threaten American agriculture because they spread the disease bovine babesiosis, commonly called cattle fever. This disease caused enormous economic losses to the U.S. cattle industry in the late 1800s and early 1900s.

A Deadly Cattle Disease

Cattle fever is caused by one of two protozoan blood parasites carried by cattle fever ticks. The parasites, called *Babesia bigemina* and *Babesia bovis*, infect, reproduce in, and eventually rupture an infected animal's red blood cells, releasing the parasites and hemoglobin into the animal's bloodstream. This results in anemia and lower blood oxygen levels, which can reduce milk production and cause weight loss, increased respiratory rate, and death. Infected animals may also have red-colored urine because the kidneys filter the hemoglobin out of the blood. This is why the disease is also called "red water."

Cattle Fever Tick Life Cycle

Cattle fever ticks develop through three life stages while on the host animal: larva, nymph, and adult. Adult female ticks mate while on the host animal. After engorging with host blood, they drop off the animal to lay up to 4,000 eggs on the ground. Once the eggs hatch, the larvae attach to animals that walk by the larval cluster, and the cycle continues. Up to four generations of ticks can be produced each year.

Disease Spread

When cattle fever ticks take a blood meal from an infected animal, they ingest the protozoan blood parasites. These protozoa develop and eventually migrate to the tick's reproductive system where they can pass to laid eggs. Tick larvae that hatch from these eggs may be infected with the protozoa when they begin to feed on a new animal. This is how the infection is passed between tick generations and among host animals. Potential cattle fever tick hosts include livestock (mainly cattle and horses), white-tailed deer, and exotic hoofstock, such as nilgai antelope and red deer, among others. Cattle fever ticks rarely attach to humans.

Various female ticks (left to right) Rhipicephalus *(Boophilus)* spp., a cattle fever tick; *Dermacentor* spp.; and *Amblyomma* spp.

Various male ticks (left to right): *Rhipicephalus (Boophilus)* spp., a cattle fever tick; *Dermacentor* spp.; and *Amblyomma* spp.

Three of the cattle fever tick's four life stages (left to right): larva, nymph, and adult. Nymphs and adults have eight legs; larva have six legs and look like a small black dot. Egg stage not shown.

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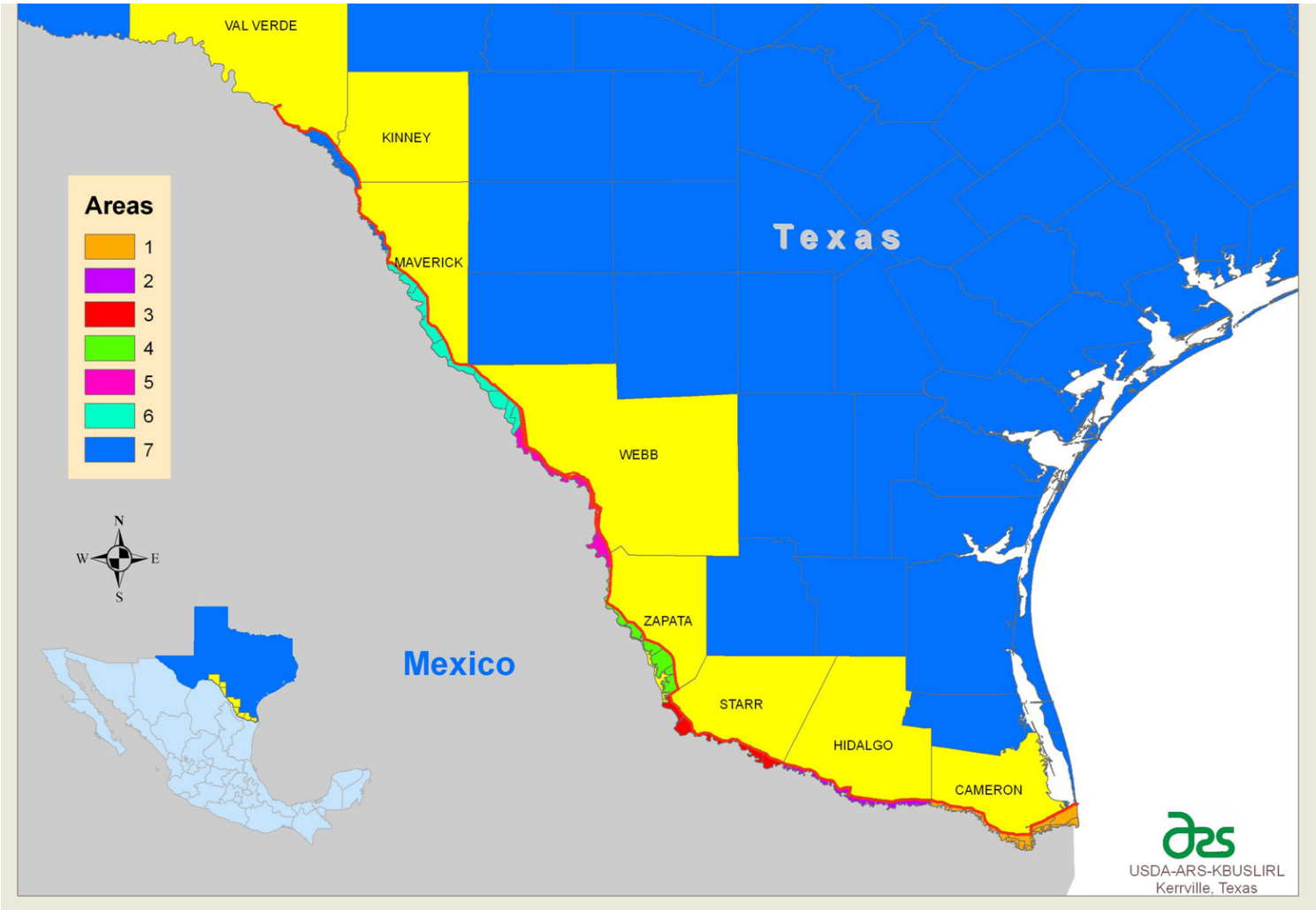

Map of South Texas counties showing CFTEP work areas.

Eradication Efforts

The U.S. Department of Agriculture (USDA) Cattle Fever Tick Eradication Program (CFTEP) works alongside the Texas Animal Health Commission in a cooperative program to stop these ticks from spreading. However, in recent years, the number of cattle fever tick infestations has increased significantly. Cattle fever and the ticks that spread it are common to parts of Mexico. The CFTEP's mounted inspectors routinely patrol horse trails that they maintain alongside the Rio Grande to monitor for signs of stray or smuggled livestock from Mexico that might carry fever ticks into the United States. Intercepted animals are inspected, treated for ticks, and quarantined. Land that the intercepted animals have crossed is also quarantined. Inspectors also watch for illegal livestock movements. Currently, there are eight CFTEP work areas in South Texas.

Contact Us

To report a suspected cattle fever tick infestation or learn more about these pests or the eradication program, please contact the closest area office.

Area 1 – Brownsville: (956) 546-6004

Area 2 – Mission: (956) 580-3355

Area 3 – Rio Grande City: (956) 487-5007

Area 4 – Zapata: (956) 765-4911

Area 5 – Laredo: (956) 723-3051

Area 6 – Eagle Pass: (830) 773-5565

Area 7 – Del Rio: (830) 775-5452

Area 8 – Harlingen: (956) 264-9804

Texas Animal Health Commission – (512) 719-0700