

Money to Fight FEVER TICKS

USDA offers cost-sharing dollars for land management techniques that could deliver a blow to fever ticks.

By Robert Fears

The USDA Natural Resources Conservation Service (NRCS) has provided more than \$2.4 million dollars in technical and financial assistance to South Texas landowners to help fight the spread

... we are sitting on a time bomb.



CONSERVATION PRACTICES APPROVED UNDER EQIP FOR FEVER TICK CONTROL

- Brush Management
- Fencing
- Nutrient Management
- Pasture and Hay Planting
- Pest Management
- Pipeline
- Pond
- Prescribed Burning
- Prescribed Grazing
- Range Planting
- Upland Wildlife Habitat Management¹
 - Deer and Exotic Wildlife Census
 - Population Size Management
 - Prescribed Grazing
 - Prescribed Burn
- Water Well
- Watering Facility

¹All four practices listed under Upland Wildlife Habitat Management have to be executed to qualify for support in this category.

of the fever ticks. This initiative is a partnership effort with the USDA Animal and Plant Health Inspection Service (APHIS) and the Texas Animal Health Commission (TAHC), as well as other local, state and federal agencies.

Don Gohmert, Texas state conservationist, announced the initiative in early 2009 after meetings with APHIS and TAHC. The technical and financial assistance are available through the Environmental Quality Incentives Program (EQIP) to landowners in 17 counties: Brooks, Cameron, Dimmit, Duval, Frio, Hidalgo, Jim Hogg, Jim Wells, La Salle, Kinney, Maverick, Starr, Val Verde, Webb, Willacy, Zapata, and Zavala. This initiative focuses on conservation practices that can positively affect fever tick control.

The two fever tick species of concern are *Boophilus annulatus* and *B. microplus*. These ticks by themselves do not cause tick fever. However, they are capable of carrying a protozoan called *Babesia bovis* or *B. bigemina*.

When infected fever ticks feed on cattle, they inject protozoa into the bloodstream. These protozoa attack the animal's red corpuscles, causing acute anemia and an enlarged liver and spleen. The protozoa cause a fast and brutal death in as many as 90 percent of infected cattle. Fortunately, this microbial blood parasite is not harmful to humans.

Horses, white-tailed deer and exotics such as nilgai, elk and red deer can also act as hosts for the ticks. But according to TAHC, *Babesia*-infected ticks are unlikely to cause death in animals other than cattle.

"*Babesia* has not been found in South Texas fever ticks to date," reports Dr. Bob Hillman, former Texas state veterinarian and immediate past executive director of TAHC. Hillman retired from TAHC at the end of December 2009. "However, I feel we are sitting on a time bomb. Approximately 80

percent of the imported Mexican steers have *Babesia* in their blood streams and, although they have not been contagious, it is only a matter of time until our own cattle become infected."

Through a cooperative agreement, APHIS and TAHC identify and treat tick-infested animals, and attempt to prevent migration of stray cattle and wildlife across the Rio Grande River from Mexico. Although these efforts continue, the NRCS program provides opportunity for ranchers to strengthen the fever tick fight through land conservation.

"EQIP money designated to the fever tick concern provides an opportunity for ranchers to holistically manage the problem," explains Dusty Crowe, NRCS rangeland management specialist in Carrizo Springs. "One of the primary focuses of the NRCS program is the redesign of pasture systems so cattle become easier to pen and work."

Quarantine procedures and common treatment options

If cattle on a ranch are found to be infested with fever ticks, the ranch is quarantined. If tick-infested animals are found at a livestock market or other facility, they are returned to their premises of origin and that ranch is quarantined. The market or facility where the ticks were found must be cleaned and disinfected.

Cattle and horses on quarantined premises and on adjacent pastures are subject to inspections and treatment, and their movement from the quarantined ranch is restricted. Livestock must be dipped or sprayed with Co-Ral immediately after fever tick detection. Then the rancher is presented two options.

Option 1 is to dip or spray every animal in the infested pastures every 14 days for six to nine months. Cattle are marked with a colored paint in a different spot before each dipping to show when

they were treated. Animals new to the herd or missed during previous treatments are easy to spot because they are not properly marked.

A USDA tick inspector must certify that 100 percent of the herd is treated. If all cattle in the herd are not accounted for, or if fever ticks are found on cattle during any of the treatments, the quarantine period is reinitiated.

Once the cattle are found to be tick-free, injections of doramectin (Dectomax™) every 28 days can be substituted for the spray and dip treatments. The advantage of this substitution is the cattle are penned less frequently.

With Option 2, cattle are dipped or sprayed at 14-day intervals and must undergo two tick-free inspections by USDA personnel prior to being moved from the premises. When the cattle are tick-free, they can be moved to a new, tick-free pasture. The tick-infested pasture is left empty for nine months so the ticks will die from the lack of a food source and failure to complete their life cycle. Free-ranging deer and exotics are considered livestock and must be treated by approved methods during the period the pasture is left vacant.

"Gathering cattle every 14 days for fever tick treatment is very expensive for the rancher," says Ed Bowers, director of field operations for APHIS in Laredo. "Pastures in South Texas are very large with many of them being a thousand acres or more. Most pastures are densely covered with brush and there is a shortage of cowhands. These three situations make gathering cattle very difficult.

"The most popular way to gather cattle in this country is with a helicopter at \$300 per hour," continues Bowers. "When you are required to pen your cattle every 14 days for nine months, your profit for the year is gone."

"This is where NRCS can help," offers Crowe. "We provide financial and technical assistance with con-

struction of cross fences, ponds, water wells, watering facilities and pipelines. These installations allow a rancher to use smaller pastures, which improves the ability to pen cattle. They also provide a system for pasture rotation that helps conserve grass because of more efficient forage utilization.”

Better equipped with a more workable system

“I had to pen my cattle for fever tick treatment every 28 days during most of 2008 and I don’t want to go through that again,” says Bill Martin who ranches near Carrizo Springs. “My pastures range in size from 1,500 to 2,000 acres and it requires a lot of work to gather cattle in pastures of this size. It wears out cowboys and puts the cattle under a lot of stress. I lost some cattle during the 2008 roundups due to the stress of handling and the summer heat. When I heard about the NRCS program, I decided to participate so that I could build a more workable system.

“With NRCS help, I subdivided my 2000-acre pasture into four 500-acre pastures and built a watering lot where the four pastures meet,” continues Martin. “In the middle of the watering lot, I built a 30-foot diameter water trough that is two feet deep. A pipeline was installed for transporting water to the trough. Not only did NRCS help pay for this construction, but they are also contributing toward my implementation of a rotational grazing system between the four pastures.

“On this part of the ranch I am not only better equipped to handle fever tick quarantines because of the smaller pastures,” Martin says, “but I am also better prepared for drought with my rotational grazing system. If NRCS money is available next year, I am going to divide some additional pastures.”

Range management tools can be used against fever ticks

“The second focus of the NRCS program is the implementation of range improvement practices that discourage fever tick population growth and at the same time improve range condition and productivity,” states Crowe.

“One of these range improvement practices is prescribed grazing which involves some type of pasture rotation system. In these systems, some of the pastures are not grazed while cattle are rotated to others. Allowing a pasture to rest not only gives grass an opportunity to recover from grazing, but it also helps reduce fever tick populations by removing their hosts for a period of time.”

“NRCS cost-shared practices such as brush management and prescribed burning can provide good tick control,” says Ronald Davey, USDA Agricultural Research Service (ARS) at Mission. “Fever ticks must have moisture to survive. A practice such as brush removal lets more sun reach the soil and grass understory, which results in an unfavorable environment for the fever tick. Root plowing is a common brush control practice in South Texas and it can be effective for a period of seven to eight years.

“If done at the right time, prescribed burning will kill fever tick larvae,” continues Davey. “In addition, prescribed burning temporarily removes vegetation which results in increased tick exposure to the sun and breaks their life cycle.”

“Upland wildlife habitat management is another available land conservation practice under EQIP and the fever tick concern,” adds Crowe. “A producer must agree to conduct a deer and exotic wildlife census, manage population sizes, initiate a prescribed grazing system and do a prescribed burn to qualify for payment under this practice. Upland Wildlife Habitat

Management is a multi-faceted approach to control the fever tick, its hosts and the associated habitat.

“There are peripheral practices such as nutrient management (fertilization), pasture and hay planting, pest management (weed and brush control on hay or improved pastures) and range planting that can also be part of the program. For instance, if a large percentage of the grass is destroyed in root plowing, we are going to require reseeding of a perennial grass.”

“Another partner in the fever tick initiative is the Rio Bravo Resource Conservation and Development (RC&D) Council in South Texas,” says Gohmert. “They are providing assistance to counties for upgrading dipping vats, expanding dry hydrant coverage and helping prescribed burn associations acquire needed equipment.

“Other states generally consider the fever tick to be just a Texas problem, Gohmert adds. “But if it isn’t stopped here, it will reclaim its historic range and that means the livestock industry will be devastated from here to Washington, D.C.

“We know that in working together with the landowners and other partners to fight the Texas fever tick, we will be that much closer to eradication,” states Gohmert.

“By utilizing the delivery system already on the ground, NRCS and the Soil and Water Conservation Districts can work with landowners to develop and implement conservation plans that address the whole property in order to protect their natural resources while disrupting the life cycle of the fever tick.”

“I am glad that NRCS joined our tick battle,” says Bowers. “We need all the help we can get and the ranchers need relief. The fever tick epidemic has been — and still is — a financial disaster for South Texas ranchers.” ■