



EMERGENCY DISEASE PROGRAM ALERT

Animal Health & Food Safety Services

Animal Health Branch

Heartwater - Florida Takes Action to Safeguard Against Disease Incursion - January 2000 -

On December 17, 1999, Florida animal health officials announced emergency regulations to protect their state from the introduction of heartwater, a devastating bacterial disease of domestic and wild ruminants (cattle, sheep, goats, antelope, and deer) which is transmitted by ticks. Heartwater has never been seen in the United States (U.S.), however, it causes serious losses in sub-Saharan Africa, and can be fatal in 40-100% of susceptible animals. The principal mode of introduction of heartwater into the U.S. would be from the importation of infected *Amblyomma* ticks or carrier animals from Africa or the Caribbean. There is no treatment once disease has developed and no vaccine. Control is based on eliminating the tick vector, which can be extremely difficult. If heartwater is introduced into the U.S., it would devastate the livestock industry.

Increased Risk

The U.S. has always been at risk of heartwater introduction but the risk has increased in recent years. During the last 35 years, tick vectors of heartwater have been inadvertently introduced into the U.S. on imported wildlife, such as rhinoceroses, antelope, cape buffalos, zebras, ostriches, tortoises, and monitor lizards. It is feared that the unregulated movement of wildlife from heartwater-affected areas will lead to the establishment of heartwater-infected ticks in the U.S.

Ticks can also enter on imported livestock. The tick vector was introduced into the Caribbean on imported cattle from Africa during the last century. In 1980, their establishment in the Caribbean led to the first recognition of heartwater in the western hemisphere.

The proximity of the Caribbean to Florida and the inadvertent introduction of ticks on imported wildlife have heightened concern that this serious disease could be introduced into the U.S.

Florida Takes Action

Florida officials have been conducting aggressive surveillance for *Amblyomma* ticks that can transmit the disease. Since 1997, over 500 ticks capable of transmitting heartwater have been found in Florida. Nine reptile facilities were found to have a total of 119 tick-infested reptiles; however, none tested positive for the heartwater organism. On November 29, 1999, Florida inspectors found 15 *Amblyomma sparsum* ticks on leopard tortoises imported from Africa. The ticks also tested positive for presence of the heartwater bacteria *Cowdria ruminantium*. The facility is under quarantine and procedures are underway to eradicate all ticks in the area.

The emergency regulation places restrictions on the importation of animals (amphibians, reptiles, llamas, antelopes, and captive wild species) from countries where heartwater is present.

Florida animal import restrictions include:

- the need to obtain a movement permit and certificate of veterinary inspection prior to entry of animals,
- inspection of animals at entry, and
- possible quarantine and treatment of the animals or denial of entry.

The regulation also requires that animals entering Florida from countries where heartwater is not endemic be inspected prior to entry and be certified free of the signs of infectious or communicable disease and free from vectors.

The Florida Fish and Wildlife Conservation commission also established an emergency regulation banning the importation or transportation of any African spurred or leopard tortoises into Florida.

What is the United States Department of Agriculture (USDA) doing?

The USDA is charged with protecting our nation's borders from disease or pest incursion from international sources. Since 1994, the USDA has funded, along with international organizations, the Caribbean *Amblyomma* Programme. The goal is to eradicate *Amblyomma* ticks from the region, which will in turn diminish the risk of incursion into the U.S.

The issue of carrier animals complicates the exclusion of infected animals. Whereas most ruminants show severe signs of heartwater, certain species such as cape buffalo, giraffe, and five species of African antelope are known to carry the disease without showing signs. These animals appear healthy but, if an *Amblyomma* tick is present and becomes infected, heartwater may spread to susceptible species. Carrier animals can be tested for the presence of the heartwater bacteria. As a precaution, the USDA tests all ruminant stock, whether captive wild or domestic, for the presence of heartwater prior to allowing entry into the U.S. However, several non-ruminant animals, including leopard tortoises, guinea-fowl, and scrub hares, may also carry heartwater.

Importantly, the USDA does not regulate the importation of reptiles, amphibians, and some captive wild species. The risk of heartwater entry through importation of these species is being evaluated.

What is the Animal Health Branch doing?

At this time, California will not be changing its animal movement regulations, but will focus on increasing tick surveillance within the state and providing information to producers and veterinarians about heartwater.

What can the livestock producer do?

✓ Call your veterinarian if animals show unusual signs of disease or experience unexpected increases in sickness or death. Your veterinarian will notify the Animal Health Branch if it is felt that the condition is suspicious of heartwater.

The signs of heartwater may include:

- ◆ rapid onset of fever
- ◆ loss of appetite
- ◆ respiratory distress
- ◆ nervous signs such as circling, incoordination, inability to rise, and paddling motion of the limbs
- ◆ sudden death
- ◆ on necropsy, straw-colored to reddish fluid is seen in the sac surrounding the heart (hence the name heartwater), and in the chest and abdominal cavities

✓ If you see unusual looking ticks infesting your animals, notify the Animal Health Branch. You may remove the tick from the animal and place it in an empty film canister, blood vial, or plastic bag. The ticks will be identified and tested to determine if they are capable of transmitting heartwater. This will be done at no charge to you.

✓ Work closely with your veterinarian when exporting or importing animals from another country or when moving animals inter-state. By following animal movement requirements, you are safeguarding animal agriculture!

Related Brochures Available from CDFA:

- Heartwater: An Increasingly Serious Threat to Livestock and Deer Populations of the United States
- Protecting the Health of California's Animal Agriculture
- Biosecurity Tips for Foreign Travelers
- Transportation of Livestock into California

For additional information call:

Animal Health Branch

Headquarters:	(916) 654-1447
Permit Line	(916) 651-6278
Redding District:	(530) 225-2140
Modesto District:	(209) 491-9350
Tulare District:	(916) 685-3500
Ontario District:	(909) 947-4462

USDA	(916) 854-3900
	tollfree (877) 741-3690