



NOTICE TO PRACTITIONERS

The Office of the State Veterinarian, Kentucky was notified (June 2022) by the Tennessee State Veterinarian of a disease outbreak of *Theileria orientalis* Ikeda in a herd of beef cattle in Middle Tennessee. While *T. orientalis* Ikeda is not a reportable disease it was recently listed as an Emerging Risk from USDA APHIS.

T. orientalis Ikeda is a tickborne protozoon disease that causes anemia in cattle. There is no effective treatment or vaccine for infections. It is a differential diagnosis for anaplasmosis.

Clinical signs are similar to anaplasmosis and include pale mucous membranes, jaundice, difficult breathing, lethargy, occasional abortions, and deaths. Diagnostic testing by PCR detection of *T. orientalis* Ikeda from anticoagulated bovine blood is performed by labs at Virginia Tech University, Cornell University, and Kansas State University.

Tick identification is helpful in the diagnosis and premise assessment. At this time, The University of Kentucky Entomology Department has a laboratory that can identify ticks at no cost.

<https://entomology.ca.uky.edu/ticksurveillance2022>

T. orientalis Ikeda is not a public health concern. Contact with affected cattle has not been proven to be a human health risk.

This disease is transmitted to cattle by the bite of the *T. orientalis* Ikeda-infected *Haemaphysalis longicornis* tick (Asian longhorned tick, ALT) or through use of contaminated needles. ALT has been identified in 16 states including Kentucky. Boone, Breathitt, Floyd, Madison, Martin, Metcalfe, and Perry counties have known detections.

The ALT requires warm-blooded animals including humans, wildlife, and domestic animals to feed on for survival. A male tick is not needed for reproduction. A female can produce 1,000-2,000 offspring without mating. A single animal may become host to thousands of tick offspring exacerbating the severity of anemia and increasing the risk of disease transmission. The tick may also live for extended periods (overwinter) in the environment (grass/woods) harboring infectious diseases such as *Theileria orientalis* Ikeda.

ALT was discovered in the United States in 2013. It is known to be the tickborne vector for reportable cattle diseases theileriosis and babesiosis, and the human disease Rocky Mountain spotted fever. While *Theileria orientalis* Ikeda infections are not reportable, they are noted to be an emerging (2017 to current) threat with the potential to cause significant economic losses to the cattle industry.

Tick control should be considered from both the animal and the environment perspective. Currently there are no known acaricides labeled for use against the ALT. The use of pesticide impregnated ear tags, pour-ons, sprays, and back rubs should be beneficial in control of the tick. Employment of more than one method will yield better control results.

Keep pasture mowed short as long grass will enhance tick survival. Perimeter fencing of a minimum of 20 feet from wooded areas will reduce the number of ticks on the grazing area. Routinely inspect



livestock, pets, and humans for ticks. Keep in mind that wildlife can serve as tick hosts and accelerate their spread. Utilize your veterinarian and laboratory resources for tick collection and identification.

Laboratory identification is the best way to confirm the identity of ALT. The ticks are light brown in color and often smaller than a sesame seed. The adult female is about the size of a pea when it is full of blood. Males are rare and not needed for reproduction. It only takes a single tick to introduce a new infection.

SEEKING ASSISTANCE IN TICK SURVEILLANCE

To determine the distribution of the Asian Longhorned Tick (ALT) in the Commonwealth, Kentucky Office of State Veterinarian seeks practitioner's assistance in tick surveillance. Practitioners and producers are encouraged to submit ticks for classification, to the University of Kentucky's Entomology Department. Submission form is found at https://entomology.ca.uky.edu/files/tick_submission_information_form.pdf . For information on tick sample collection and submission protocols visit <https://entomology.ca.uky.edu/ticksurveillance2022>

SEEKING ASSISTANCE IN *T. orientalis* Ikeda SURVEILLANCE

To determine the distribution of *T. orientalis* Ikeda in the Commonwealth, Kentucky Office of State Veterinarian seeks practitioner's assistance in sampling cattle herds. Interested veterinary practitioners are encouraged to contact Dr. Kerry Barling, Deputy State Veterinarian at Kerry.barling@ky.gov for detailed information.

