



**VIRGINIA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES**  
**Updates from the State Veterinarian's Office** **Spring 2019**

**WHAT'S INSIDE**

*Ticks and Theileria*

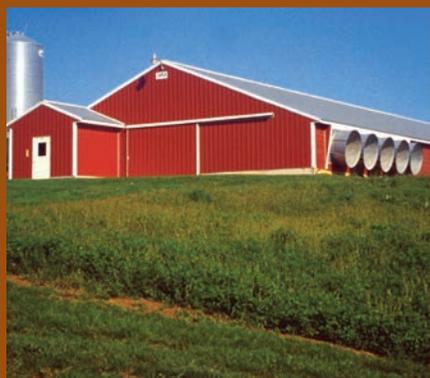
*Extended Equine CVI*

*Moving from Paper to Digital CVIs*

*Brucella abortus: Eradicated or Still a Concern?*

*Elk Restoration*

*Update on Molecular Testing*



One bit of good advice I got years ago as a new veterinarian was to never try to BS a dairyman, and that approach has served me well over the years in all types of situations. Hand-in-hand with that advice is another we are all familiar with: it is okay to say that we don't know the answer to a question as long as we seek to find it.

We find ourselves now in a situation where these sayings come to mind: the detection of the newly discovered Longhorned tick and *Theileria orientalis* blood-borne parasite in Virginia within the last year. After we announced the detection of the tick in Virginia, a practitioner asked me "What does this mean; what are we supposed to do with this information?" I told him we do not know precisely what the impact will be. I am concerned about the diseases that the tick could carry, as well as the economic ramifications of *Theileria* infection in naïve cattle. But both organisms appear to be here now, with limited options to control the spread. As we are taught in vet school, disease manifestation is a result of the interaction of the pathogen, the host and the environment, so our combined surveillance for disease signs associated with these new organisms in Virginia is critical.

As always, I appreciate the partnership that we have with practitioners, and encourage you all to continue to let us know what we can do to support you and minimize the effects of disease on Virginia animal agriculture.



*Charles C. Goodhue*

## TICKS AND THEILERIA

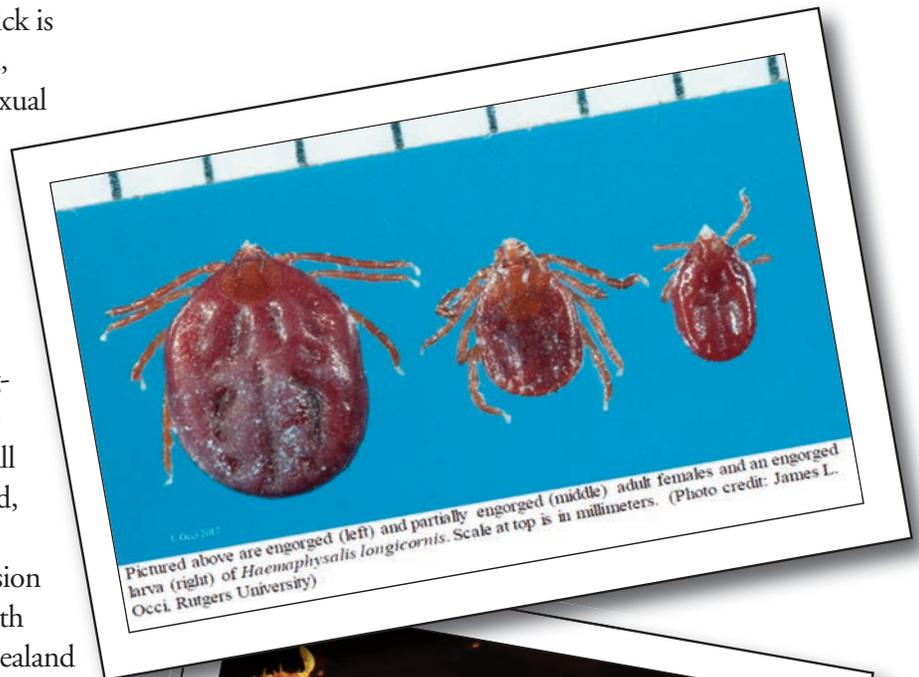
On May 14, 2018 the National Veterinary Services Laboratory in Ames, Iowa confirmed the finding of the *Haemaphysalis longicornis* tick (otherwise known as the East Asian or Longhorned tick) in Virginia. Up until the fall of 2017, *H. longicornis* was believed to be absent from the United States (US). Originally from northeast Asia, *H. longicornis* was first found in the US in New Jersey in the fall of 2017, and has now been identified in 9 states and 18 localities in Virginia. The tick has been found on numerous domestic animals and wildlife. Considering the presence of the tick in such a wide geographic area, as well as being found on wildlife (including birds) means that unfortunately, the tick is here to stay. Depending on geographical location, *H. longicornis* can be either parthenogenetic, bisexual or both, meaning the females may or may not require a male for reproductive purposes. For this reason, females greatly outnumber males, which are extremely rare. The Longhorned tick looks very similar to native ticks to the naked eye, but entomologists tell us that *H. longicornis* adults can be identified under magnification by their short capitulum, inornate scutum with festoons, dark brown coloring and small size, sometimes described as small as a poppy seed, with nymphs being even smaller.

*H. longicornis* is associated with the transmission of numerous bacteria, viruses and protozoa of both veterinary and human health concern. In New Zealand and Australia, *H. longicornis* is mostly associated with bovine theileriosis (*Theileria orientalis*), a disease of cattle with potential economic concern. In December of 2017, *T. orientalis* was identified on a farm where *H. longicornis* was later found. While the direct relationship between *H. longicornis* and *T. orientalis* has not yet been confirmed in the US, the causal relationship in other countries is certainly cause for concern. *Theileriosis* often mimics anaplasmosis, and clinical signs of fever, anemia and anorexia are common.

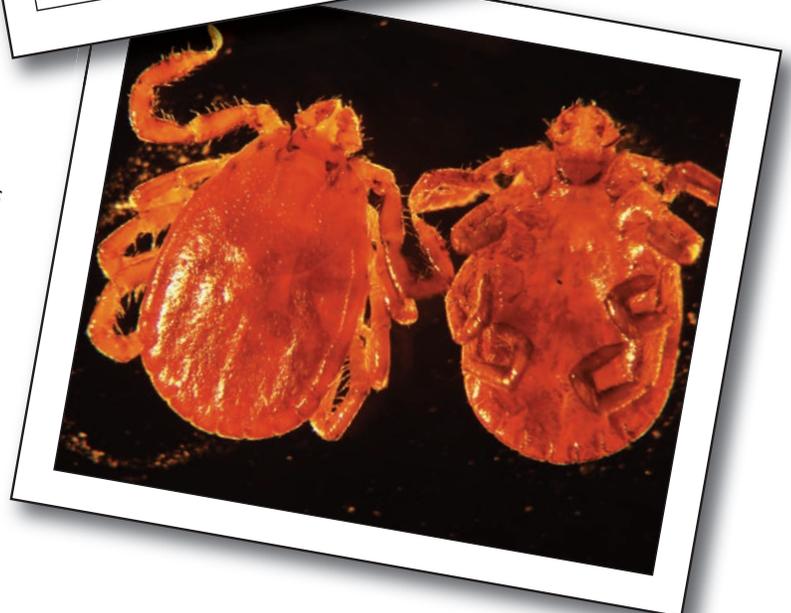
Virginia state veterinary officials continue to work with the U.S. Department of Agriculture and other federal and industry partners to determine the extent and significance of this finding. The Virginia

Department of Agriculture and Consumer Services (VDACS) is asking veterinarians and producers to be alert for the presence of *H. longicornis* and *T. orientalis* in livestock.

If you find suspected Longhorned ticks, please contact VDACS and collect the ticks for identification. Work is ongoing at Virginia-Maryland College of Veterinary Medicine to evaluate the *Theileria* organism, determine likely pathogenicity and investigate its distribution in the region. Methods to reduce tick exposure or tick populations are highly recommended.



Pictured above are engorged (left) and partially engorged (middle) adult females and an engorged larva (right) of *Haemaphysalis longicornis*. Scale at top is in millimeters. (Photo credit: James L. Occi, Rutgers University)



## EXTENDED EQUINE CVI



Due to changing requirements in participating states, the Extended Equine Certificate of Veterinary Inspection (EECVI) will replace Virginia's Equine Interstate Movement Event Permit (sometimes referred to as the VA equine six month movement permit), allowing an owner to travel interstate with their equine without the need for a Certificate of Veterinary Inspection (CVI) every thirty days. According to most state regulations, in order to transport a horse, mule, donkey, pony, miniature horse or other equine across state lines, a CVI and negative test for Equine Infectious Anemia (otherwise known as the Coggins test) is required. The CVI, commonly known as a health certificate, requires that an accredited veterinarian inspect each equine for signs of disease to ensure that it appears healthy for travel. The EECVI extends the original timeframe of a CVI from 30 days to up to six (6) months from the CVI inspection date or until the expiration of the EIA test, whichever comes first. Prior to each movement, the equine owner or agent must log into the GlobalVetLink database and obtain a Health Declaration and Movement Permit (HDMP), attesting that the animal is healthy before it travels. In order to remain a valid document, the EIA test form and the HDMP must be kept together (official digital copies are acceptable). Other providers of electronic CVIs may also support the EECVI in the future, but at this time, GlobalVetLink is the only provider of EECVIs.

To issue an EECVI, veterinarians will need to verify

certain information, such as owner name, address and official identification if required by the state of destination. Additionally, veterinarians will need to examine the animal and assure that the animal has a valid, negative EIA test. If the EIA test is not valid for at least six months from the EECVI issue date, a new EIA test can be drawn, or the system will shorten the expiration date of the EECVI to the date when the EIA test expires. Veterinarians will need to review temperature taking and general signs of equine sickness with owners that must be evaluated prior to each movement.

When it is time to travel, owners are responsible for logging onto the system to obtain a HDMP prior to each interstate movement. Owners will need to verify movement information and affirm that the equine has not shown any signs of sickness in the past seven days, or if it has, has been cleared by the veterinarian for movement. Additional information, including the list of states that will accept an EECVI, can be found at:

[www.globalvetlink.com/products/eecvi](http://www.globalvetlink.com/products/eecvi).

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## MOVING FROM PAPER TO DIGITAL CVIs

Certificates of Veterinary Inspection (CVIs), commonly referred to as health papers, continue to be an important tool in documenting livestock movements between states. CVIs are required for the movement of all livestock species across state lines and may be requested for animals attending shows and sales within the Commonwealth. CVIs certify the health status of animals, document any required tests and are important sources of animal identification used for disease traceability. Only accredited veterinarians are approved to write CVIs and moving animals across state lines without official documentation violates both state and federal statutes.

Fortunately, several web-based applications have been developed and made available to veterinarians to create digital CVIs that provide required information to state officials in a timely manner and in many cases better facilitate the movement of livestock in interstate commerce.

### MCVI-AGVIEW

<https://agview.com/login>

An application (app) developed by the International Institute for Animal Diseases at Texas A&M University that is available as a mobile (phones and tablets that run Apple iOS or Android operating systems) and web browser-based service. The app can be downloaded from the Apple and Google Play online stores at no cost, but as of January 2019 each CVI created will cost \$3.00. Data is automatically shared with animal health officials in origin and destination states.

### GLOBALVETLINK (GVL)

<https://www.globalvetlink.com/products/healthlink>

GlobalVetLink has been around for several years. Creating a CVI costs \$5.00 (not including any monthly subscription fee) and data is made available to animal health officials in origin and destination states.

### VIRGINIA ANIMAL ENTRY PERMIT SYSTEM (in development, release expected in 2019)

The State Veterinarian's office is developing an animal entry permit system that should be online in

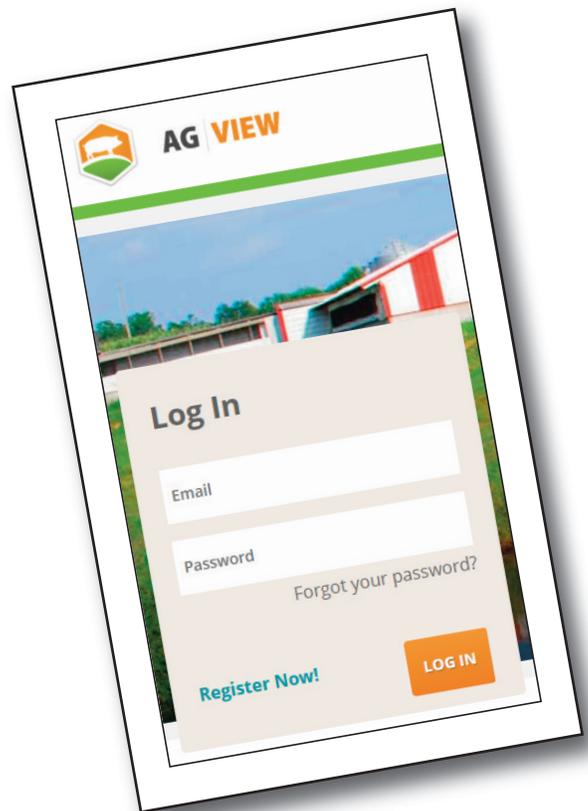
2019. This service will be available to accredited veterinarians at no charge and will provide timely and accurate information to state animal health officials. Additional information will be available soon.

### VETERINARY SERVICES PROCESS STREAMLINING (VSPS)

<https://vsapps.aphis.usda.gov/vsps>

This service was developed by USDA and is available to practitioners at no cost, but does not provide data directly to state officials.

Submission of electronic CVIs will improve the quality of regulatory information, enhance disease traceability and should make the movement of animals in interstate commerce more efficient over time. Veterinarians writing health papers for animals moving into and out of Virginia are strongly encouraged to begin exploring electronic applications in preparation for the transition away from paper forms. For additional information or questions, please contact the VDACS Office of Veterinary Services.



## ***BRUCELLA ABORTUS: ERADICATED OR STILL A CONCERN?***

In the winter of 2018, public health officials in New York identified a child sickened by the vaccinal RB51 strain of *Brucella abortus*. This child drank unpasteurized milk, legally bought from a Pennsylvania dairy that was milking cows that were routinely vaccinated for Brucellosis. Of interest, but no particular significance, the properly vaccinated cow originated in Virginia.

Historically, at the start of federal involvement for Brucellosis eradication in 1934, 11.5 percent of cattle in the United States tested positive for *B. abortus*. By 2007 the infection rate was less than 0.0001 percent. As a result of the concerted efforts of many veterinarians over more than half a century, all 50 states have been declared Brucellosis free since 2009, representing a tremendous public health success. However, surveillance through blood and milk testing, as well as monitoring for clinical signs, is still critically important to prevent the reintroduction of Brucellosis. Today the only reservoir

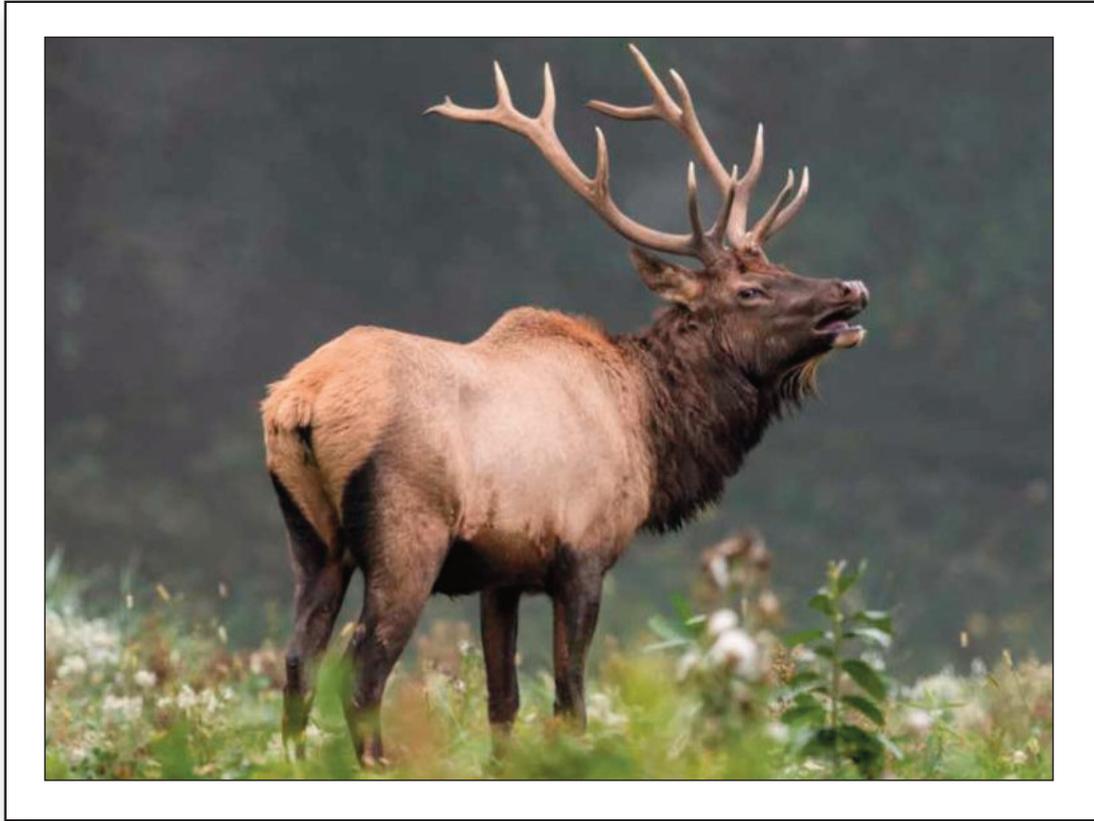
for the disease in the US is in select counties of Montana, Idaho and Wyoming that comprise the Greater Yellowstone Area (GYA), where the disease is endemic in the elk and bison herds. Yet, disease spillover happens, and three beef herds in Wyoming were infected through contact with elk in October and November of 2018.

Whole herd vaccination using Strain 19 or RB51 has been critical in the eradication of Brucellosis, and is still practiced in certain high incidence areas. However, recent cases like the one in the child described here demonstrate that vaccination is not without risk. The RB51 attenuated strain of *B. abortus* is rarely shed in milk, but with the consumption of raw milk on the rise, this may become more than an isolated event. Veterinarians need to consider risk based models for herd vaccination. The need to vaccinate is a decision you must make with your clients, based on risk due to animal movement, additions and replacements.

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## ELK RESTORATION



Several years ago, the Virginia Department of Game and Inland Fisheries (DGIF) initiated an elk restoration project in southwest Virginia. Historically, the last native elk in Virginia were harvested in 1855. In the early 1900s with the formation of DGIF, elk were reintroduced. Numbers again dwindled and by 1970, elk could no longer be found in Virginia. In the mid-1990s, Kentucky initiated an elk restoration project and elk could soon be seen crossing the border into Virginia. In 2011 elk hunting was prohibited in Wise, Dickenson and Buchanan counties, in what would become the Elk Restoration Area (ERA).

Between 2012-2014, 71 elk sourced from Kentucky were released into the ERA, through an intensive process managed by DGIF. The reintroduction was not without controversy, as disease introduction, agricultural damage, environmental impact and human conflicts were discussed. The released elk were quarantined and tested twice for TB, Brucellosis, Bluetongue, EHD, CWD, Johnes, Vesicular Stomatitis, Anaplasmosis, IBR, Leptospirosis and BVD. In addition, they were dewormed, eartagged, microchipped and fitted with radio collars so

their migration could be tracked for up to 3 years.

The elk population has continued to grow and the herd is currently estimated at approximately 200 animals. Disease surveillance continues today by DGIF and any elk found dead are brought to the VDACS Wytheville Regional Animal Health Laboratory for necropsy. Regardless of diagnosis, all elk are screened for TB, Brucellosis and CWD. The number one necropsy diagnosis has been presumptive meningeal worm (*P. tenuis*) migration of the brain and spinal cord. In elk, *P. tenuis* tends to invade the brain or spinal cord, while in deer parasitic travel remains confined to the meninges. The number two and three causes of death are trauma and poaching respectively.

Moving forward, DGIF has released its Elk Management Plan for the next 10 years. Rather than a target population number, their goal is to find an optimum Cultural Carrying Capacity. This concept aims to find a balance between elk numbers, agriculture, environment and humans with a minimum of conflicts.

## UPDATE ON MOLECULAR TESTING

The VDACS Regional Animal Health Laboratory System recently was able to upgrade its polymerase chain reaction (PCR) testing equipment, purchasing new smartcyclers for use in three of the regional animal health laboratories (RAHLs). This equipment upgrade will allow for more samples to be tested at one time, decrease test turnaround time for clients, and allow for a quicker in-state response to diseases of importance to producers and veterinarians.

Over the last few years, the RAHLs have expanded their diagnostic PCR test offerings, including testing for the following diseases and pathogens: Avian Influenza, Newcastle Disease, *Ornithobacterium rhinotracheale*, Turkey Coronavirus, *Mycoplasma gallisepticum*, *M. synoviae*, *Salmonella sp.* and Infectious Laryngotracheitis (all at the Harrisonburg RAHL); Johne's Disease and *Salmonella sp.* (Lynchburg); Equine Herpesvirus (both the neuropathogenic and the non-neuropathogenic forms), Leptospirosis and Potomac Horse Fever (Warrenton); and Trichomoniasis (Wytheville). Plans are underway to add a Strangles PCR test (*Streptococcus equi sp. equi*) and possibly an Anaplasmosis PCR test in 2019.

In addition, in 2018, the Harrisonburg RAHL was certified to perform screening testing for the Foot and Mouth Disease (FMD) virus. VDACS sought this approval from the USDA's National Animal Health Laboratory Network (NAHLN), in order to enhance Virginia's rapid response ability. The NAHLN approval is difficult to obtain and requires proof of the laboratory's quality system practices, the ability of employees to run such tests and a commitment to early detection of foreign animal diseases. In the event of a foreign animal disease investigation involving vesicular lesions, samples can now be run in state, using PCR testing and the NAHLN protocol, in order to rule out FMD. Samples still must be split and run at the National Veterinary Services Laboratories (NVSL) for confirmation, but early detection of a positive case should allow for a more rapid response by regulatory officials and the Commonwealth's animal agriculture industry.

For information on test availability, please contact your nearest RAHL, or visit [www.vdacs.virginia.gov/animals-animal-health-laboratory-services.shtml](http://www.vdacs.virginia.gov/animals-animal-health-laboratory-services.shtml).





## CONTACT INFORMATION

For general questions or communication, please email us at [vastatevet@vdacs.virginia.gov](mailto:vastatevet@vdacs.virginia.gov), or feel free to contact any of our staff members below:

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