

Warm weather means mosquito season, again!

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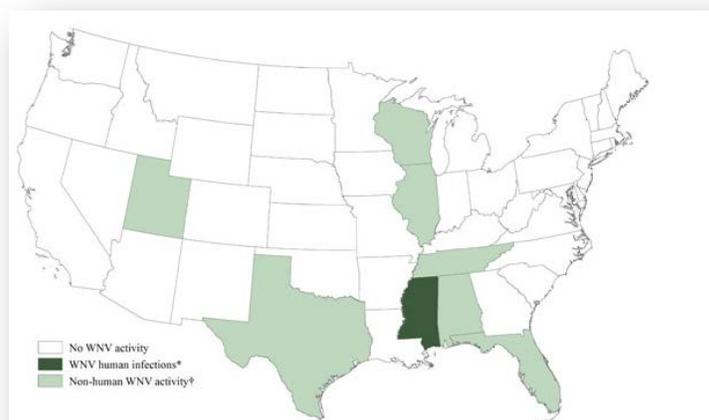
Spring and summer are beautiful seasons in Kansas, a time when the temperatures are warm and the sun is often shining, a great time to spend time with our equine friends! Unfortunately there can be a down side to the change in weather, particularly when we think about insects and the potential for infectious disease transmission. Therefore, at this time of year it is important to plan ahead with the aim to maintain horse health.

One important disease to consider at this time of year is West Nile virus (WNV) encephalitis. When we encounter warm weather with plenty of moisture, similar to what we have seen recently, we must be aware the risk for infectious disease transmission by mosquitoes and plan accordingly. We saw a rise in equine WNV cases in 2013 when we had similar weather patterns and now is the perfect time to take steps to avoid your horse getting sick from this serious virus.

West Nile Virus Encephalitis

WNV is a widespread flavivirus occurring in Africa, Eurasia, Australia, and North America. As many of us recall in August 1999, WNV was identified as the causative agent of encephalitis in birds, horses, and humans in New York City and Suffolk County. Since then, WNV has spread following the migration of birds (reservoir hosts). The virus cycles between competent bird reservoir hosts that sustain viremia for 1-4 days post exposure and mosquitoes that carry the virus in their salivary glands. The virus has been identified in 43 species of mosquito throughout the USA although not all of these are competent vectors. Susceptible birds succumb to infection and humans, horses, and other mammals are dead-end or incidental hosts. Other species, such as cats, dogs, camels, and cattle develop immunity without becoming ill.

Through the course of disease outbreak in the United States from 1999 through 2013 reported disease has included > 39,000 human cases and > 25,000 equine cases. In 2013 United States there were 2,469 human cases reported for the year. In Kansas there were 91 human cases in 2013. Although it is still early in the warm season it is important to recognize that cases have already been reported in 2014, particularly in the south and south eastern part of the country.



<http://www.gov/westnile/statsMaps/preliminaryMapsData/activitystatedate.html> Data as of June 10, 2014

Clinical signs

Clinical signs of WNV in horses may be mild, resulting in a fever or mild change in attitude. More severe disease typically includes ataxia (incoordination), muscle fasciculation (tremors) of the muzzle, weakness, recumbency, and / or hypersensitivity to touch and sound.

The onset of clinical signs is often sudden with progression occurring over the following 2-4 days. At the first sign of illness it is important for horse owners to **contact their veterinarian** so treatment can be initiated that will be aimed at reducing the severity of clinical signs and disease progression.

Although the course of disease is generally complete by 14 days, some horses may require several weeks to many months to recover fully.

Outbreaks in the Kansas region usually take place between August and October. Vaccine programs should be initiated in the spring to early summer months so that at the time of challenge horses are prepared with an optimal immune response, in most cases avoiding disease completely.

Diagnosis

If clinical signs consistent with WNV are observed blood tests are available that can aid in the diagnosis of disease. In addition to running blood tests the examination may include running tests to rule out other causes of disease that may cause similar clinical signs.

Prevention

Vaccines

In 2014 we are fortunate to several effective vaccines available that provide horses with immune protection at the time of disease challenge.

Horse owners are encouraged to **contact the KSU-VHC 785-532-5700 or their local veterinarian** to discuss the optimal vaccine program for their horse. It is important that a well-orchestrated vaccine program is designed to protect horses from illness. If an appropriate protocol is not followed vaccine protection cannot be ensured.



- In young horses that are less than 1 year of age, vaccination should be initiated between 3-6 months of age with the goal of completing a 3-dose initial series before the horse is exposed to virus.
- In horses that are greater than 1 year of age, but have not been previously vaccinated the initial series should include a 2-dose series approximately 3-4 weeks apart.

- In horses that have been previously vaccinated, a booster vaccine should be administered during the spring months with the goal of providing protection through the warm season when mosquitoes exposure exists; in Kansas this is typically the case through the end of October.
- Broodmares should have their initial series completed before breeding with a booster vaccine administered approximately 30 days before delivery of the foal.

Eliminate standing water

Avoid any environment that promotes mosquito breeding by eliminating standing water.

Items to look for: anything that holds water such as water troughs, bird baths, old tires, any other container that is just lying around.

If you must have water available for livestock keep it clean and change regularly. If needed add mosquito eating fish to the tank to avoid mosquito amplification.

Eliminate exposure to infected birds. If suspect birds are identified the local diagnostic organization should be contacted regarding safe handling and diagnostic testing protocols.

Supplemental information

Horse owners are encouraged to visit AAEP and The Horse to learn about several health-related issues in horses.

<http://www.vet.k-state.edu/depts/VHC/equine/timely.htm>

www.aaep.org

www.thehorse.com