Mosquito-borne Equine Diseases

The Educated Horseman: Disease Series

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When mosquito season arrives in Louisiana, it's generally accompanied by two diseases that potentially are fatal for your horses. West Nile virus and eastern equine encephalomyelitis are prevalent in Louisiana and can cause death in horses.

Many cases of both West Nile and EEE are reported annually across Louisiana. The majority of those cases could have been prevented by vaccinating horses.

West Nile virus and eastern equine encephalomyelitis are viral diseases that can cause encephalitis and meningitis (infection of the brain and spinal cord or their protective coverings). While each disease is caused by a different virus, they both are transmitted to horses by bites from infected mosquitoes. Horses are considered to be the "dead end hosts" for West Nile virus and eastern equine encephalomyelitis, meaning that the virus is not directly contagious from horse to horse.

Horses that become infected with West Nile virus may have loss of appetite, depression, fever, weakness or paralysis of the hind limbs, muscle spasms or twitching, impaired vision, lack of coordination, head pressing, aimless wandering, convulsions, inability to swallow, circling, hyperexcitability or coma. There is no specific treatment for West Nile virus and the disease has a 30 percent mortality rate.

Animals that become infected with eastern equine encephalomyelitis or "sleeping sickness" may show signs of fever, lethargy and loss of appetite. Neurological signs usually develop five days after infection and include impaired vision, circling, head pressing, wandering, difficulty swallowing, hyperexcitability, lack of coordination, convulsions and death. The mortality rate of horses infected with eastern equine encephalomyelitis usually exceeds 90 percent, and most deaths occur two to three days after the onset of neurologic signs.

There are vaccines available to help prevent West Nile virus and eastern equine encephalomyelitis, however. It is extremely important that horses are vaccinated according to the label and veterinary recommendations. A minimum of a yearly booster is required, while horses that are stressed, travel frequently due to show schedules or live in warm, humid climates should be vaccinated twice a year.

Vaccinating your horses against mosquito-borne viruses is an inexpensive way to help reduce the possibility of infection, but vaccination alone is not 100 percent effective. There also are some other easy steps you can take to prevent mosquitoes from affecting your horses:

Avoidance

- House horses indoors during peak periods of mosquito activity, if possible (around dusk and dawn).
- Reduce use of lighting during peak periods of mosquito activity.
- Use fans to help keep mosquitos off horses while they are stabled.
- Use chemical repellents specifically designed for use on horses.

Reduction

- Eliminate areas of standing water on your property. For example, watch for these potential things that can hold water: tires, manure storage areas, drainage areas with stagnant water, wheel barrows, pots and shallow ponds.
- Clean out livestock watering troughs weekly or add a supply of mosquito fish, which will feed on mosquito larvae.
- Clean out storm drains and gutters in areas where horses are kept.

Research has shown that vaccination is a vital component of reducing your horses' chances of becoming infected with West Nile virus or eastern equine encephalomyelitis. Vaccination should be completed before the peak of mosquito-breeding season, and a multifaceted management approach ensures reduced exposure.

If you believe your horse may be infected with a mosquito-borne virus, or if you would like more information about creating a program to reduce your farm's exposure to such diseases, contact your local veterinarian.

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