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West Niles Virus Update

For the past few weeks the WNV has been headline news for all media sources. The WNV is a virus of Birds (BlueJays and Blackbirds appear to be the primary reservoirs.), which is transmitted through mosquitoes. Mammals are incidental hosts and can develop disease if infected. WNV has been shown to infect several mammalian species, and severe disease and death in humans and horses have been documented. The virus can cause Encephalitis (inflammation of the brain); however, authorities state that most infected people and horses show no signs or only minor signs of disease. Most human cases are seen in immune compromised individuals (eg, young, elderly, or sick). Predisposing factors in horses have not been established, but immune compromised horses are probably at greater risk.

Since introduction into the northeastern U.S. in 1999, migrating birds have rapidly spread the virus down the East Coast, across the South, and into the West, with equine cases being reported in Texas (11 horses) and North Dakota (2 horse) this year. In 2001 85 horse with neurological illness in the U.S. were confirmed to have WNV. Of these 85 horses, 32 (38%) died or were euthanized. As of 25 July, USDA has confirmed 47 equine cases for year 2002 as follows: Florida (14), Kentucky (1), Louisiana (17), **Mississippi (1, Harrison County)**, North Dakota (2), **Tennessee (1, Jefferson County)**, and Texas (11). 17 of the 47 reported cases (36%) were fatal (died or euthanized). Since we are not testing clinically normal horses, the true infection and mortality rates are unknown.

As expected, a seasonal increase of equine cases was seen last fall, with 24 of the 25 cases reported in Mississippi occurring between 15 September and 20 October, with all 8 cases reported in Kentucky occurring between 25 August and 27 October, and with the only case reported in Tennessee occurring the first week of October. Migrating birds are the primary reservoir for the WNV, EEE (Eastern Equine Encephalomyelitis), and WEE (Western Equine Encephalomyelitis), therefore, more cases are expected when the blackbirds migrate through the Midsouth this fall.

The WNV has been isolated in birds in the Midsouth, but no equine cases of WNV have been reported in west Tennessee. The closest equine cases were documented in northeast Mississippi (25 cases in 2001). The WNV is here, and it is just a matter of time until the first horse in our area is diagnosed with this disease.

Current USDA recommendations for controlling the spread of the WNV include the following:

1. **Reduction of Mosquito Breeding Site:** Eliminate stagnant water source such as tires and small puddles, where mosquitoes breed. Clean roof gutters. Turn over wheelbarrows and buckets. Aerate ornamental ponds or stock them with fish that eat mosquito larvae (*Gambusia sp*). Clean livestock tanks weekly. *Mosquitoes will breed in any water that stands more than 4 days.*
2. **Screened Housing:** House horses in barns with maintained insect screening. Use fans to reduce the mosquitoes' ability to feed on horses.
3. **Insect Repellents:** Apply fly spray to your horses frequently. *Due to the practical limitations of repellents, they should not be relied upon as the sole means to reduce mosquito exposure.* Timed barn spray systems may improve coverage.
4. **Reduce Outdoor Exposure:** Although most of us would agree that peak mosquito activity is in the evening and morning, and that horses should be stalled during these periods, some mosquitoes are daytime feeders. A recent epidemiological study indicates that night stalling may reduce exposure.
5. **Vaccination:** The Fort Dodge Conditional Vaccine is available and, by law, must be given by a licensed veterinarian. Initially 2 doses are given 3-6 weeks apart. *Fort Dodge emphasizes that the second dose in the initial series **must** be given to get a significant vaccination titer.* I recommend *biannual* boosting after the initial series. The cost of vaccination per dose is \$20, and **I recommend vaccinating all horses.** Vaccinating your horse against EEE or WEE will not give cross protection against the WNV since the WNV is in a different viral family. Horses should be vaccinated **NOW** to protect them during the fall bird migration in September and October.

For more information, please call Animal Care Hospital. *Our job is serving you and your animals!* On the Internet, the Center for Disease Control (www.cdc.gov/) and the USDA (www.aphis.usda.gov/) have excellent pages on the WNV.