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July 12, 2004
News Release
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Vesicular Stomatitis (VS): What is it and why should we be concerned?

The Texas Animal Health Commission (TAHC) has been tracking a series of outbreak of vesicular stomatitis in Texas and New Mexico, according to Larry Nickel, CEA-Agri. Six more premises with horses have been confirmed in Texas and include horses on a ranch in Uvalde county, five premises with horses in Starr county (two of these include affected cattle), and one premise in Dimmit county. In addition to these premises, there are confirmed cases in horses in Reeves county (the first this year), Yoakum county, and Val Verde county. According to the TAHC, this is the first outbreak since 1998. It began in mid-May and may continue until the fall.

According to the Animal Plant and Health Inspection Service (APHIS) of the USDA, vesicular stomatitis (VS) is a viral disease that primarily affects cattle, horses and swine, and occasionally sheep and goats. In addition to these domestic animals, many wild animals including deer, bobcats, raccoons, and monkeys have been found to be susceptible hosts. Humans have become infected when handling affected animals.

There are two serologically distinct viruses, the New Jersey and Indiana viruses and there are 3 subtypes of the Indiana virus. There is no cross immunity between the two viruses nor between the viruses of vesicular stomatitis, foot and mouth disease, and swine vesicular disease even though the diseases are similar.

Vesicular stomatitis occurs most frequently in the summer months throughout the southwestern U.S., particularly in river-ways and valleys. In Central and South America, outbreaks coincide with the rainy seasons.

In livestock affected with vesicular stomatitis, blister-like lesions form in the mouth, and on the dental pad, tongue, lips, nostrils, hooves and teats. When these blisters swell and break, the raw tissue is so painful that infected animals refuse to eat and drink and show signs of lameness. Severe weight loss can occur in all animals and dairy cattle may experience a severe drop in milk production.

The major concern about vesicular stomatitis, in addition to the economic losses incurred in an outbreak, is that the outward signs are very similar (but less severe) than foot and mouth disease

which was eradicated from the U.S. in 1929. The outward signs of vesicular stomatitis in swine are also similar to swine vesicular disease. Both foot and mouth disease and swine vesicular disease are classified as "foreign animal diseases" and can only be accurately diagnosed through laboratory tests. Vesicular stomatitis is an internationally recognized reportable disease and exports of U.S. livestock and animal products would be restricted if vesicular stomatitis were to spread.

Interestingly enough, vesicular stomatitis has been found only in the western hemisphere. It is endemic to the warmer regions but epidemic outbreaks can occur in the temperate areas.

The actual transmission of vesicular stomatitis is not known. Insect vectors, mechanical transmission and movement of animals are most likely responsible. One type of vesicular stomatitis virus is transmitted by a specific type of sand fly. Once introduced into the herd, it is transmitted from animal to animal by saliva or fluid from lesions. In humans, symptoms are similar to acute influenza and include symptoms including fever, muscle aches, headache and general malaise.

If livestock contract vesicular stomatitis, the incubation period ranges from 2 to 8 days. Excessive salivation is the first sign followed by a rise in temperature (either slightly before or when the lesions appear).

In cattle, the lesions (usually small but can be quite large) appear on the hard palate, lips and gums and sometimes appear on the muzzle and nostrils. Dairy cattle have lesions form on their teats (as may beef cattle) and may suffer from subsequent mastitis. Horses develop lesions on the upper surface of the tongue. Swine usually show lameness as a result of foot lesions. Secondary effects may include lesions in the soft tissues of the feet of all species.

The effects of vesicular stomatitis varies within species. Usually 5 to 10 percent of affected herds show clinical signs of the disease. The incidence in dairy cattle has been reported up to 80 percent. If there are no secondary infections, the affected animals usually recover in about 2 weeks. Death losses are rare.

There is no specific treatment for vesicular stomatitis, animals can best be protected by owners avoiding affected herds or areas known for outbreaks. Mild antiseptic mouthwashes may bring more rapid recovery and relief to affected animals. Good sanitation and quarantine of affected premises will contain the infection until it dies out on its own.

When a diagnosis is made, the following procedures should be followed immediately: 1) Separate affected animals from not affected animals immediately, preferably by stabling (animals on pasture are more frequently affected with the disease); 2) Do not move animals from the premise or area affected by vesicular stomatitis until 30 days after the outbreak ends unless going directly to slaughter; 3)Begin insect control programs to eliminate or reduce breeding areas and populations on animals; and 4) Use protective measure when handling affected animals. *Any potential signs of vesicular stomatitis should be reported immediately to the TAHC at 1-800-550-8242 (24 hr phone line).*

References:

APHIS. 2004. Vesicular Stomatitis. Accessed July 9th , 2004. http://www.aphis.usda.gov/lpa/pubs/fsheet_faq_notice/fs_ahvs.html

Merck. 1998. Vesicular Stomatitis. In: The Merck Veterinary Manual, 8th Ed., Merck and

Co., Inc. Whitehouse Shoals, NJ. Pp. 495-496.
http://www.merckvetmanual.com/mvm/index.jsp

TAHC. 2004. Texas Animal Commission Updates. June 24th and July 7th, 2004. Austin, TX. http://www.tahc.state.tx.us/

7/12/04