Vital Info About Vesicular Stomatitis (VS)

Information from the Texas Animal Health Commission

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What IF?

Consider this scenario: You check on your cattle, sheep or swine and see that several are salivating excessively; one or two have erosions in their mouth. Or, your best roping horse goes lame, is off feed, and when you take a closer look, you notice the animal has some small blisters in its mouth

Your recommended reaction? Call your private veterinary practitioner or the Texas Animal Health Commission (TAHC) immediately, so tests can be run to determine the cause of illness! The TAHC can be contacted day or night at 1-800-550-8242.

An alert horse owner in Reeves County, in far west Texas, reported clinical signs in several animals in May 2004. Laboratory tests confirmed Vesicular Stomatitis (VS) infection on the premise that has nine horses and eight head of cattle. This is the first time the disease has been diagnosed in the U.S. since l998.

Foot-and-Mouth Disease (FMD) or Vesicular Stomatitis (VS)?

Blisters, erosions in the mouth, excessive salivation, or crusty sores around an animal's muzzle, teats or hooves immediately bring to mind the dreaded and highly contagious foreign animal disease, Foot-and-Mouth Disease (FMD). FMD can affect cloven-hooved animals, including pigs, cattle, sheep, goats, and deer, but it has not been detected in the U.S. since 1929.

For years, ranchers have been warned to stay alert and report potential signs of FMD, as this disease could be introduced into the U.S., accidentally through normal trade or traffic, or intentionally as an act of terrorism.

Vesicular Stomatitis (VS), on the other hand, is a disease that occurs sporadically in the U.S. Its clinical signs in swine, cattle, and other cloven-hooved animals mimic FMD, and laboratory tests are necessary to differentiate between the two diseases.

VS usually affects cattle and pigs. Unlike FMD, however, VS also can affect horses and other equine species. Sheep and goats are quite resistant to VS, but deer, bobcats, raccoons and monkeys are susceptible to the infection.

When a producer or private veterinary practitioner reports that an animal has blisters, erosions or sores, TAHC or U.S. Department of Agriculture (USDA) veterinarians, trained as foreign animal disease investigators, will assist in the disease investigation. They will work with the private practitioner at no charge to take a history on the animals and collect blood samples, swabs and tiny snippets of tissue from the blisters or sores on the affected animals

Samples collected from horses and other equine animals will be forwarded for testing (at no charge to owners) to the National Veterinary Services Laboratory in Ames, Iowa. Samples from cattle, swine, or other species of animals susceptible to FMD will be shipped (also at no charge to the producer) to the Foreign Animal Disease Diagnostic Laboratory (FADDL) on Plum Island, New York.

Test results are known in two or three days. In the meantime, all animals on the affected premise are placed under a hold order to prevent any spread of disease. Even during a VS outbreak, it is vitally important that livestock owners report potential cases, to

ensure that samples are submitted for laboratory testing to rule out FMD infection!

More about VS

The good news: If VS is confirmed, infected animals are quarantined only until 30 days after all lesions are healed, and the animals are re-inspected by a state or federal regulatory veterinarian. This short-term quarantine helps prevent the movement of animals and the spread the disease to other premises, fairs, markets or to other states.

Although VS rarely results in death loss, infected animals lose condition, because they do not eat or drink adequately until the painful mouth lesions heal.

VS has a history of occurring sporadically in the U.S., mainly in the Southwest. Researchers have determined that outbreaks initially are started by a virus transmitted by arthropods, black flies and sand flies. What is not fully understood: why does infection occur only occasionally, and where virus resides during the years disease is not seen.

For instance, 13 years passed between a VS outbreak in 1982-83 that involved more than 600 premises in 14 states, and 1995, when infection was detected in animals on more than 365 premises in five states, including New Mexico, Colorado, Arizona, Utah and Texas (which had infection confined to only one premise).

Texas was spared in 1997, when VS was detected in late May in Arizona in horses. Before the outbreak ended, infected animals were detected on 380 premises in four states: Arizona, Colorado, New Mexico and Utah. Until May 2004, the most recently reported cases occurred in 1998, affecting several horses on a ranch in Reeves County, in west Texas, and in New Mexico and Colorado.

The Cycle of VS Infection

VS usually has an incubation period of two to eight days, before the infected animal develops blisters that swell and burst, leaving painful sores. After the first case in a herd, the disease may be spread from animal to animal or by biting insects. Infected animals also can spread the virus when their saliva or the fluid from ruptured blisters contaminates feed, water or hay shared with herd mates.
Sick animals should be isolated and may need supportive care to prevent a secondary infection where blisters have broken. Painful lesions also can form around animals' hooves, resulting in temporary lameness.

Infected dairy cattle may have a dramatic drop in milk production. Although milk is not regarded as a vehicle for transmitting VS, raw milk from infected cows should not be consumed, because it may be contaminated with vesicular fluid from teat lesions. Pasteurization, or heat treatment, will kill the VS virus, making milk safe to consume.

In two or three weeks, VS infection will usually run its course and animals will begin healing. VS outbreaks usually -- but not always -- end with the fall or winter's first freeze.

Ranchers, veterinarians and others who handle sick animals should wear rubber or latex gloves as a biosecurity measure to prevent the spread of disease to other animals -- or to themselves. In rare instances, humans can contract VS and develop a flu-like illness that lasts four to seven days.

Strategies for Preventing VS

Even with the best defensive measures, VS could infect a herd. However, these tips may help protect livestock:

1. **Control biting flies**
2. **Keep equine animals stalled or under a roof at night to reduce exposure to flies.**
3. **Keep stalls clean**
4. **Feed and water stock from their individual buckets.**
5. **Disinfect borrowed equipment or tools prior to using them on your premise.**
6. **Don't visit a ranch that's under quarantine for VS. Wait until the the animals have healed.**
7. **VS vaccines for cattle may be made available during significant outbreaks, although little is known about their effectiveness in preventing infection or reducing clinical signs of VS.**

Trade Implications of VS

Confirmed cases of VS must be reported to interstate and international trading partners, which may result in restrictions, additional inspections or testing requirements.

Prior to shipping livestock, check with the state of destination to ensure all entry requirements have been met. To obtain contact information for other states' animal health regulatory officials, contact the TAHC at 1-800-550-8242.

Don't Wait! Report!

Call your private veterinary practitioner or the TAHC immediately, if your livestock develops blisters, sores, erosions or excessive salivation. The TAHC hotline is operational 24 hours a day at 1-800-550-8242.