



Understanding Vesicular Stomatitis

Read about the contagious disease vesicular stomatitis and learn how to protect your herd. Veterinarian Aaron Tangeman explains.

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By Dr. Aaron Tangeman

Q: I recently attended a seminar for operators of small ranches and farms. The guest veterinarian reviewed several contagious diseases, including vesicular stomatitis. I thought only cattle, horses, and pigs were susceptible, not realizing my alpacas could be at risk. What should I know about vesicular stomatitis? How can I protect my herd?

A: In addition to the livestock already mentioned, donkeys, mules, and humans can suffer from the virus that causes vesicular stomatitis (VSV).

Sheep and goats, which rarely display clinical signs, as well as llamas and alpacas, are occasionally infected. The mode of VSV transmission, while not well understood, is believed to be primarily by insects, particularly black flies and sand flies.

Consuming coarse feeds causes breaks in mucosal tissue, allowing VSV to spread within the herd which shares food and water resources. Deer, raccoons, bobcats, and monkeys can serve as viral hosts.

Outbreaks have been recorded throughout the United States, but have been primarily limited to the southwestern and western states since the 1980s. The last occurred in 2004 and resulted in quarantines continuing into 2006. Once occurring in eight- to 10-year cycles, outbreaks primarily during warm months are occurring more frequently.

The two strains responsible for the disease, the New Jersey and Indiana serotypes, are structurally similar but produce distinct antibodies.

Signs and Symptoms

You should know and be able to recognize the signs and symptoms of vesicular stomatitis. It is a reportable disease that shares similar symptoms with foot and mouth disease. The incubation period ranges from three to 14 days, although small, fluid-filled blisters (vesicles) may develop in as few as 24 hours. Excessive salivation and drooling may be the first symptoms you notice. The animal may develop a fever. The vesicles may appear in the mouth, on the lips, nostrils, hooves, or teats. Variable in size, some may be quite small while others may be large enough to cover the tongue. The vesicles will swell and break open. The resulting ulcers are painful, making the animal reluctant to eat, drink or nurse. The animal may become lame if the hooves are affected.

While not all herd members will demonstrate clinical signs, nearly 100 percent can test positive for antibodies.

Talk to your veterinarian to learn the specific signs and symptoms of vesicular stomatitis that may affect the livestock breed(s) on your farm. Separate any animals displaying lesions from the others. Your vet will confirm the diagnosis with blood tests or by swabbing the lesions or drainage from the blisters.

State and federal animal health authorities must be notified. Exercise precautionary measures in handling secretions and tissue samples since humans who are exposed can develop flu-like symptoms from the virus.

There is no specific treatment; the disease runs its course in about 21 days. Use antiseptic mouthwashes to comfort the animal and avoid secondary bacterial infections. Offer softened feed, limit grazing time to avoid exposure to blood-feeding insects, consider insect control programs, and provide shelter for your herd.

Currently there is no approved VSV vaccine available in the United States.

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Dr. Aaron Tangeman received his Doctorate of Veterinary Medicine from the Ohio State University in 1998 and practices in Northeast Ohio.