New Scrapie Live-Animal Test Approved

On Jan. 11, 2008, Veterinary Services (VS), a unit within the U.S. Department of Agriculture’s Animal and Plant Health Inspection Service, approved a new live-animal test for detecting scrapie in sheep and goats. Similar to the currently used third eyelid test, the test involves collecting lymphoid tissue. The new test, however, uses rectal mucosa biopsy, as opposed to third eyelid biopsy. Both tests can be conducted on live animals using local anesthetic.

In 2007, VS conducted a large-scale field study to evaluate rectal biopsy as a means to collect lymphoid tissue for scrapie testing. Using live, high-risk sheep and goats, the study compared the test results from rectal biopsies and third eyelid biopsies to test results obtained postmortem from the same animals on brain-stem, lymph node, tonsil and rectal biopsy. The study found that testing live-animal rectal biopsy samples is an effective means of detecting scrapie. The rectal biopsy testing detected 87 percent of the scrapie positive animals that were determined to be positive by testing tissues collected postmortem.

Live-animal, rectal biopsy testing has a low rate of complications and is faster and easier than other live-animal testing methods. The study also showed that there was strong agreement in test results from multiple rectal biopsy sites in the same animal. This will allow for repeat testing over time if needed.

Scrapie is a fatal, degenerative disease affecting the central nervous system of sheep and goats. Infected flocks that contain a high percentage of susceptible animals can experience significant production losses. Prior to approval of third eyelid biopsy, definitive diagnosis of scrapie only could be made following necropsy and examination of brain, lymph node or tonsil or by general anesthesia and collection of lymph node or tonsil. Live-animal testing using local anesthesia provides a practical method of detecting scrapie-infected animals before development of clinical signs, which could assist producers in eradicating the disease from their flocks.

For more information on scrapie and the National Scrapie Eradication Program, go to http://www.aphis.usda.gov/animal_health/animal_diseases/scrapie/