

The below sheep and goat information covers Scrapie tagging requirements, marketing requirements, disease facts and information about our Scrapie testing program.

**All SHEEP and GOATS should be tagged with official Scrapie identification tags before leaving your farm. The USDA provides tags free of charge.**

**To obtain official Scrapie Identification tags and/or your Scrapie flock/herd number call: 1-614-856-4735.**

## **Market Tagging Requirements**

Federal market approval has been updated to include the handling of sheep and goats. This approval requires the separation of animals able to move freely, which will be classified as breeder sheep and goats, from those that are restricted to move only for slaughter.

Information provided to the market by the producer determines how the animals can move, and the type of ID to be used.

White scrapie tags will still be available for use in the animals that arrive with an owner's statement declaring they are the flock of origin or the flock of birth. If you can provide the market with such a statement at the point of arrival, then your animals will be allowed to be sorted into pens marked for "breeder" animals. Ideally, the animals should arrive with scrapie tags already in place – along with the owner statement.

The markets will start using blue slaughter-only/meat scrapie tags in sheep and goats that do not arrive with an owner statement as described above. These tags are designed to be used on animals that must remain in normal slaughter channels only. That means sheep and goats with the blue slaughter/meat only tags can not be taken back to a farm to be used for exhibition or breeding purposes.

Scrapie tags are available by contacting the USDA APHIS Veterinary Services office in your state. Call toll free at: 866-873-2824 ( 866 USDA TAG) or direct at: 614-856-4735.

Tags and applicators are shipped at no charge.

**Scrapie** is a fatal, degenerative disease affecting the central nervous system of sheep and goats. It is among a number of diseases classified as transmissible spongiform encephalopathies (TSEs). Infected flocks with a high percentage of susceptible animals can experience significant production losses. Over a period of several years the number of infected animals increases and the age at which clinical signs appear decreases. The result is economically nonviable flocks. Female animals sold from infected flocks spread scrapie to other flocks. The presence of scrapie in the United States also prevents the export of breeding stock, semen, and embryos to many other countries.

First recognized as a disease of sheep in Great Britain and other countries of Western Europe more than 250 years ago, scrapie has been reported throughout the world. Only two countries are recognized by the United States as being free of scrapie: Australia and New Zealand.

The first case of scrapie in the United States was diagnosed in 1947 in a Michigan flock. The flock owner had imported sheep of British origin through Canada for several years. APHIS conducted a slaughter surveillance study from April 1, 2002, to March 31, 2003, which determined the prevalence of scrapie in mature U.S. cull sheep to be 0.2 percent or one positive out of 500 cull sheep.

In the United States, scrapie has primarily been reported in the Suffolk breed. It also has been diagnosed in a Border Leicester, Cheviots, Corriedales, a Cotswold, Dorsets, Finn sheep, Hampshires, Merinos, Montadales, Rambouillets, Shropshires, Southdowns, and a number of crossbreeds.

The combination of all of these factors has led to the decision to develop a strong scrapie eradication program in the United States. Goats, also susceptible to Scrapie (though the incidence of the disease appears to be lower than in sheep) are not part of USDA's live animal testing program. Testing for Scrapie has been far more intensive in sheep than goat populations.

## **Epidemiology and Transmission**

The agent responsible for scrapie and other TSEs is called a prion and is smaller than the smallest known virus. The scrapie agent is extremely resistant to heat and to normal sterilization processes. It does not evoke any detectable immune response or inflammatory reaction in sheep and goats.

The scrapie agent is thought to be spread most commonly from the ewe to her offspring and other lambs through contact with the placenta and placental fluids. Symptoms of the disease usually appear 2 to 5 years after the animal is infected but may not appear until much later. Sheep may live 6 months or longer after the onset of clinical signs. Death is inevitable. Genetics of the sheep affect their susceptibility to scrapie.

## **Clinical Signs**

Clinical signs are variable and develop slowly. Nerve cell damage results in affected animals showing behavioral changes, tremors of the head and neck, rubbing, incoordination, recumbency and ultimately death.

Early signs include subtle changes in behavior or temperament. These changes may be followed by scratching and rubbing against fixed objects, loss of coordination, weakness, weight loss despite retention of appetite, biting of feet and limbs, lip smacking, and gait abnormalities, (high-stepping of the forelegs, hopping like a rabbit, and swaying of the back end.)

An infected animal may appear normal if left undisturbed at rest. However, when stimulated by a sudden noise, excessive movement, or the stress of handling, the animal may tremble or fall down in a convulsive-like state.

Veterinarians diagnose scrapie based on the appearance of its signs combined with knowledge of the animal's history. . Scrapie is most often diagnosed by microscopic examinations of brain tissue at necropsy and procedures that detect the presence of the abnormal prion protein in brain tissue. Scrapie can be diagnosed in the live animal by biopsy of the lymphoid tissues. This test is used to determine whether exposed flocks are infected.

## **Why Scrapie Test?**

Genetic testing and selection helps producers to limit their risk of acquiring scrapie. This allows scrapie resistant breeding stock to be preserved. It protects other flocks from exposure by requiring the removal or permanent restriction of animals that may spread scrapie. This permits affected producers to return to normal business practices quickly. The identification and use of genetically-resistant rams will break the transmission of scrapie, thereby reducing the risk of creating newly infected or source flocks.

## **How Scrapie Testing Works**

Sheep are genotyped through a blood sample. The sheep's genotype determines its risk for scrapie infection.

Susceptible genotypes are checked via lymphoid tissue test.

Scrapie positive and susceptible animals are removed or their movement restricted.

Owners whose animals must be removed from the flock will receive indemnification from the federal government based on commercial market prices reported by the Agricultural Marketing Service. An additional premium will be paid for registered animals and may be paid for animals for which the owner can document a higher market value such as some club lamb flocks. Further, the federal government will provide testing and assistance with disposal costs. The producer is responsible for gathering and handling the sheep, applying identification, providing adequate handling facilities, cleaning and disinfecting, reporting suspect animals, and maintaining records such as sheep sales, purchases and lambing.

**For Genetic Testing**, please contact your local West Virginia Department of Agriculture Animal Health Technician (listed on our contact page), our Charleston office at 304-558-2214, or Dr. Bill Casto, USDA/VS at 614-309-8257. The criteria below cover what we can test at no charge to you under the auspices of our Scrapie Cooperative Agreement with the USDA.

**Rams:** Up to ten rams may be tested per producer (or 1 ram per 35 breeding ewes) within the cooperative agreement period. Rams of any breed or cross may be tested at codon 171.

**Use: Seed Stock:** In addition, up to 100 ram lambs may be tested for seed stock producers who agree in writing for any ram lambs testing QQ at codon 171 to: 1) castrate, 2) apply blue meat tags and cull for slaughter, or 3) use the ram as a terminal sire.

**Ewes:** Up to 75 ewes or rams (in addition to rams mentioned above) per flock may be tested if: 1) they are 14 months of age or older, 2) they are black-faced, Southdowns, Montadales, or crosses there of, and 3) it is agreed in writing that any animal testing QQ at codon 171 will be made available for third eyelid or rectal biopsy surveillance testing by state or federal personnel. Southdowns or Montadales must be recognized members of these breeds, i.e. registered, registration eligible, or from foundation stock that was registered purebred.