

SCRAPIE SUSCEPTIBILITY TESTING



Prion, the agent responsible for transmissible spongiform encephalopathies such as scrapie, BSE, and CWD, is an abnormal form of a normal cellular protein. The scrapie prion is thought to be spread most commonly from the ewe to her offspring and to other lambs through contact with the placenta and placental fluids. Signs or effects of the disease usually appear 2 to 5 years after the animal is infected.

The Rocky Mountain Regional Animal Health Laboratory (RMRAHL) is USDA certified to perform scrapie susceptibility testing at codon 171 through real-time PCR technology. This genotyping service will help interested producers decrease scrapie susceptible genotypes in their flocks. Over the long term, breeding based on genotyping will increase the resistance of the national sheep flock and promote the eradication of scrapie.

GENETIC SUSCEPTIBILITY

The genetic makeup of sheep affects their susceptibility to scrapie. The following is the USDA list of susceptible and resistant genotypes at codon 171.

Nearly Completely Resistant	RR
Rarely/Somewhat Susceptible	RQ
Susceptible	QQ

RMRAHL accepts samples Monday-Friday and performs genotyping Monday-Thursday. Results will be available in 5-10 days.

It is critical that each sample is collected with a new needle to prevent cross-contamination. Samples must be collected in purple top EDTA tubes (preferably plastic) and mixed immediately by inversion. Whole blood can be sent or the sample may be blotted on an FTA card. Call the lab for details.

The laboratory can provide a protocol for submitting scrapie samples. RMRAHL airbills for overnight delivery are available for shipping samples to RMRAHL at a reduced cost.

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