

Scrapie



www.emsofflivestockcompany.com

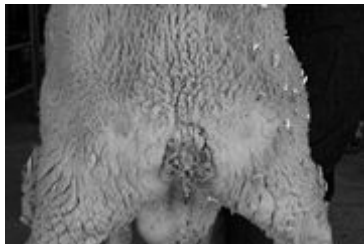


Cause:

Degenerative disease of the central nervous system caused by a prion similar to the cause of mad cow disease

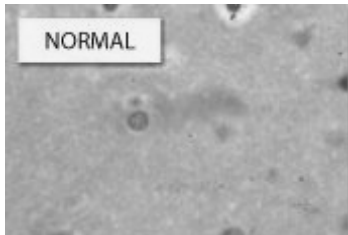
Transmission:

Unclear but likely via the placenta and birth fluids, possibly also urine.



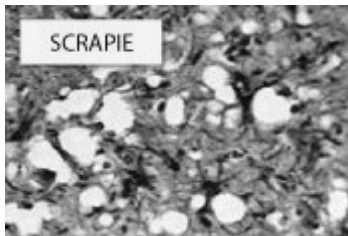
Symptoms:

Symptoms can take 2-5 years to develop after exposure. They include head wobbling, rubbing and scraping of body on solid objects (hence the name "scrapie"), loss of coordination, weight loss, and lip smacking. Death is inevitable within 6 months of onset of symptoms. Necropsy reveals a "spongy" or "holey" appearance of the brain.



Genetics:

Sheep that possesses the R gene at the 171 locus are resistant to most forms of scrapie. Therefore, it is desirable to ensure that all breeding sheep will have at least one R gene.



Eradication:

The National Scrapie Eradication Program has the goal of eradicating the US of scrapie by the year 2010. Every sheep over 1 year of age that is sold or transferred across state lines and all show sheep must be tagged with an official scrapie tag, which includes a premises ID number and an individual ID number. Records must be kept of all purchases, sales, and movement of tagged sheep so that infected sheep can be traced back to their flock of origin.

Spider Lamb Syndrome



www.emsofflivestockcompany.com



Cause:

Genetically recessive disease that causes a gradual weakening of the bones, leading to twisted limbs.

Transmission:

Genetic disease that requires lamb to inherit two SS genes at the 136 locus.

Symptoms:

Lambs generally appear normal at birth, but as they grow their legs become twisted. Their spines may also become humped and they may develop a roman nose. Lambs eventually become so crippled that they must be destroyed by the time they are a few months old.



Genetics:

Sheep can have N and S genes at locus 136. NN sheep are spider free, NS sheep are carriers but are not affected, SS sheep develop into spider lambs.

Control:

SS lambs do not survive to breeding age. All rams should be tested for their spider status. If you want to use an NS ram, the ewes should be tested as well. Never breed an NS sheep to another NS sheep, as statistically 25% of the resulting lambs will be spider lambs. If you are uncertain of the genotype of a ewe, only breed her to an NN ram.

Scrapie Susceptibility

RR and RQ are resistant to scrapie, QQ is susceptible.

RR X RR

	R	R
R		
R		

% RR _____

% RQ _____

% QQ _____

RR X RQ

	R	R
R		
Q		

% RR _____

% RQ _____

% QQ _____

RR X QQ

	R	R
Q		
Q		

% RR _____

% RQ _____

% QQ _____

RQ X RQ

	R	Q
R		
Q		

% RR _____

% RQ _____

% QQ _____

RQ X QQ

	Q	Q
R		
Q		

% RR _____

% RQ _____

% QQ _____

QQ X QQ

	Q	Q
Q		
Q		

% RR _____

% RQ _____

% QQ _____

Spider Lamb Syndrome

NN is spider free, NS is a carrier, and SS is a spider lamb.

NN X NN

	N	N
N		
N		

% NN _____

% NS _____

% SS _____

NN X NS

	N	N
N		
S		

% NN _____

% NS _____

% SS _____

NN X SS

This cross is not possible since SS lambs do not survive to breeding age.

NS X NS

	N	S
N		
S		

% NN _____

% NS _____

% SS _____

NS X SS

This cross is not possible since SS lambs do not survive to breeding age.

SS X SS

This cross is not possible since SS lambs do not survive to breeding age.



www.emsofflivestockcompany.com