Animal Health & Welfare NI
Sheep Health

Iceberg Diseases Bulletin #6
Border Disease (BD)

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Border Disease (BD) is often referred to as 'hairy shaker disease'. It's caused by a pestivirus which is similar to the virus that causes BVD in cattle. It is possible that cross-infection can occur between cattle and sheep. There is no treatment available. Infection results from in utero infection. When the virus is acquired in early pregnancy it infects the foetus by crossing over the placenta. If the foetus survives initial infection, the virus will infect foetal tissues causing a wide range of defects. Sometimes affected lambs can be born prematurely with many dying during the first weeks of life.

Any lambs that survive infection are known as 'persistently infected.' These animals will carry the virus their whole life and spread it to other animals. Sometimes, these animals can be born and show no symptoms, despite having the virus.

Signs You May See In Your Flock

- Lambs born with a tremor (more pronounced during movement) and a rough, hairy coat
- Increase in crimp or change in pigmentation of wool
- High abortion levels and stillbirths
- Lambs with mild neurological defects
- Undersized lambs
- Skeletal abnormalities
- Ill thrift in lambs

Image credit: FAS, 2020

How Infection Spreads

- Direct contact- nose-to-nose contact with infected animals, saliva, urine, faeces, semen and blood
- If a pregnant ewe comes into contact with the virus, it will cross the placenta to infect the foetus, persistently infecting the lamb if it survives. If not born with the virus the pregnant ewe will not be infected for life.

Disease Diagnosis

- Investigate any lamb showing any of the above symptoms, blood tests using PCR are useful for individual cases.
- ELISA blood tests are most useful for flock screening to identify whether infection is actively circulating in the flock (not useful for clinically affected animals- PIs- as they are born without antibodies).
- Tissue samples can be taken from aborted or dead lambs.