Animal Health & Welfare NI
Sheep Health

Iceberg Diseases Bulletin #4 Ovine Pulmonary Adenocarcinoma (OPA)

Ovine Pulmonary Adenocarcinoma (OPA)

Ovine Pulmonary Adenocarcinoma (OPA) is an infectious lung cancer in sheep, causing the development of fatal lung tumours. It's caused by jaagsiekte sheep retrovirus (JSRV). It causes progressive respiratory distress and weight loss, ultimately ending in death. Clinical signs don't usually become evident until sheep are 2-4 years old, although disease may occur quicker in lambs that are progeny of infected dams (8-12 months old).

Maedi Visna can coexist with OPA in an animal, therefore if clinical signs similar to the two diseases are shown, it may be worth testing for both.

Signs You May See In Your Flock

- Progressive weight loss (with normal appetite)
- Pneumonia (doesn't respond to treatment, secondary bacterial infections of the lung can also be common)
- Sudden deaths (often due to pasteurella pneumonia- sheep may have been in good body condition)
- Sheep lagging behind flock due to breathing difficulty
- Advanced cases- significant amount of fluid running out of animal's nostrils
- Cases may peak in adverse weather conditions

How Infection Spreads

The JRSV virus is found in the fluid from the lungs of infected sheep. Therefore transmission can occur in these cases:

- Through the air via respiratory droplets
- Close contact- housing and trough feeding
- Via milk/colostrum of infected sheep

Disease Diagnosis

- Wheelbarrow test- lifting the sheep's hindquarters to lower the head, if a volume of frothy, clear or pinkish fluid flows from the nostrils this is a positive test for OPA. Ideally this shouldn't be done on live animals as it causes significant stress, and doesn't always completely rule out OPA.
- Ultrasound examination of lungs- this can detect tumours over 1cm of size in the lungs, but it may miss early stages of infection and other pathological changes in the lungs could be mistaken for OPA.
- Post-mortem- this is the most accurate method of diagnosis