



Schmallenberg Virus

Information Leaflet for Farmers



Background

In December 2011 a new virus was identified as the cause of mild disease in cattle in Germany during late summer and autumn 2011, and foetal abnormalities in sheep, cattle and goats in the Netherlands, Germany and Belgium in November the same year. This virus was named 'Schmallenberg virus' after the German town where the virus was first identified. Schmallenberg virus is in the Simbu serogroup of the *Orthobunyavirus* group. This group of viruses includes many different viruses which occur in Asia, Africa, Australia and Israel, but have not previously been identified in Europe.

Geographical distribution

The virus spread rapidly during the vector season in 2012, and as of January 2013 disease has now been detected in 16 countries in Europe including Germany, the Netherlands, Belgium, France, Great Britain (England and Wales), Italy, Luxembourg, Spain, Denmark, Switzerland, Czech Republic, Finland, Sweden, Estonia and Poland. Disease was detected in Ireland for the first time on 30 October 2012 and Northern Ireland on 31 October 2012.

Species affected

The disease affects ruminant animals (sheep, cattle and goats). Antibodies to the virus have also been detected in bison and in red and roe deer. Horses are not affected.

Transmission

Orthobunyaviruses are primarily spread by biting insect vectors. Schmallenberg virus has been confirmed in *Culicoides* biting midges. Transmission by vectors is likely during the vector season (April to November). The virus can also infect the foetus of animals infected during the early stage of pregnancy. This may lead to abortion, stillbirth or the birth of weak, malformed newborn animals. The role of infected newborn animals in the transmission of disease is not yet known.

Risk to humans

There is no evidence to date of disease in people at greatest risk of infection, such as vets and farmers. The European Centre for Disease Prevention and Control has determined that the Schmallenberg virus is unlikely to cause illness in people. The risk posed by milk and meat is also considered negligible by the World Animal Health Organisation (OIE).

Clinical signs

Adult animals (cattle) during the vector season

- Fever, off food, reduced milk yield, sometimes diarrhoea
- Affected animals recover fully within a few days
- Herds are affected for two to three weeks

Newborn animals and foetuses (ruminants)

- Congenital abnormalities in aborted animals and in animals born alive or dead
- Bent limbs and fixed joints (arthrogryposis), stiff necks (torticollis), curved spines (scoliosis), shortened lower jaw (brachygnathia)
- Central nervous signs: 'dummy' calves, blindness, ataxia, recumbency, an inability to suck and sometimes fits



Bent limbs and fixed joints



Bent limbs and stiff neck



Bent limbs and curved spine



Stiff neck and shortened lower jaw

Trade restrictions/movement controls

The EU does not apply any trade restrictions on live animals, their meat, milk or animal by-products in relation to *Orthobunyaviruses*, as it does not consider that these goods pose a risk of transmission of these viruses. No controls are placed on farms with positive cases in Ireland.

Diagnosis

Farmers are asked to contact their veterinary practitioner if they encounter cases of aborted foetuses or newborn animals showing malformations or nervous signs. Veterinary practitioners should contact their Regional Veterinary Laboratory for advice on appropriate laboratory tests.

Impact

The impact of the disease is relatively small in most infected herds and flocks, and is entirely dependent on the stage of pregnancy at which cows and ewes are infected. In the first half of 2013 the greatest impact in Ireland will be seen in the southern and eastern counties because of the greater risk of exposure to the virus. It is likely to be greatest in herds with compact calving and flocks with synchronised breeding programmes.

Treatment and control

There is no treatment or vaccine currently available for this disease. Female animals that develop immunity before they become pregnant are unlikely to give birth to affected offspring. Malformations affecting lambs exposed to the virus in pregnancy may lead to lambing difficulties. Excessive force must not be used when assisting during lambing, as this may risk injury to both the ewe and lamb. Farmers should contact their veterinary practitioner in these cases which cannot be delivered naturally.

Farmers are advised to take routine hygiene measures when working with livestock and abortion material.

Further information is provided on the Department of Agriculture's website at: www.agriculture.gov.ie

Photos of clinical signs courtesy of LAVES-LVI Oldenburg, Pathology, Dr. Michael Brüggmann