



## **Bluetongue**

### **What is Bluetongue?**

Bluetongue is a virus (BTV) that primarily affects sheep, however cattle serve as a primary reservoir of infection. The virus is transmitted by certain strains of biting midge (Culicoides) and the spread north of the virus from its origins in South Africa is a cause for concern.

Bluetongue was first described in South Africa in the late 18<sup>th</sup> century after an importation of European Merino sheep. It was confirmed as a virus with multiple serotypes in the 1960's and the nature of a virus to adapt means there are now 24 strains recognised worldwide.

Biting midges are a crucial link in the chain of infection. Around 1400 species are recognised worldwide, however only less than 20 are considered to be actual or possible vectors of the disease. Most of these are from the USA, Australia, Africa and the Middle East but the disease has now been reported in China and Bulgaria so the list of vector species may grow. These insects show nocturnal feeding patterns and prefer still, warm conditions for feeding and moist, muddy conditions for breeding and as such is a disease primarily of the tropics or subtropics albeit within different ecosystems.

Bluetongue already looks to have spread through southern and eastern Europe and as midge species that are native to Europe are common in the UK, the concern is that favourable weather conditions may allow a northerly carriage of infection. This is compounded by the fact that disease carrying insects can be carried on the wind for long distances.

Once Bluetongue is introduced to the body, the virus replicates in local lymph nodes which then seed other lymph nodes with the virus along with the spleen, lungs and vascular system. It is vascular damage that is the most pronounced causing swellings, haemorrhage and necrosis of tissues.

### **Diagnosis**

Clinical symptoms in cattle are extremely rare and the virus will only exist within a bovine host for around nine weeks.

Sheep demonstrate a hypersensitivity reaction. This includes fever, stiffness or lameness and an increase in respiratory rate with increased salivation. Severe congestion of the nasal passage can also occur. The mouth is sore and the surrounding areas can be swollen giving a 'monkey face' appearance. Sheep will eat less and champ or hold food in their mouth to soften it. Occasionally, sheep will develop a swollen tongue with a bluish tinge caused by a lack of oxygen in the blood.

A blood test can be used to confirm infection.

### **Treatment**

There is no treatment for Bluetongue, although some animals will recover. This process can be aided with provision of shelter, food and water.

Prolonged recovery can compromise production levels through unthriftiness, wool break, abortion or birth defects.

Vaccination is a possibility (used extensively in South Africa) but not 100% effective.