

BLUETONGUE 2009



**Advice For Those Working
With Ruminants And Camelids**

June 2009

Introduction

Bluetongue is a notifiable midge-borne viral disease that can infect all ruminants, such as cattle, goat, deer and, in particular, sheep, as well as camelids such as llamas and alpacas.

The disease is different from many others in that it is not transmitted directly between animals; midges are required for disease spread and disease is confirmed only when there is evidence of circulating virus, rather than when a single infected animal is identified. In practice it is difficult to isolate the virus in midges and it is likely that disease would be confirmed if found to be circulating in susceptible animals.

At cooler temperatures, the midges that spread the disease (the disease vector) are less active and the rate of virus replication within midges is reduced. Midges are not normally active in temperatures below 15°C and winter usually prevents the spread of the virus in cooler climates.

There are currently 24 recognised strains of bluetongue. Since August 2006, there have been widespread outbreaks of bluetongue in Northern Europe and the strains of current concern here are BTV1 and BTV8.

BTV8 arrived in south east England in 2007, probably via infected midges blown over from the continent. However, no circulating disease has been seen in the UK since then and Scotland initiated a compulsory vaccination campaign against this strain in November 2008. While the high level of vaccination means that Scotland is now well protected against BTV8, we remain at risk from BTV1.

Potential implications for the Scottish ruminant livestock industry

Disease impact

Bluetongue can have significant economic impact in terms of on farm losses due to mortality and reduced productivity, and losses to export revenue as live exports are restricted from affected areas to free areas.

The symptoms of bluetongue and its potentially high mortality rate represent a significant threat to livestock welfare. Infection rates tend to be greater in cattle, but symptoms and mortality are generally more severe in sheep. Mortality can be up to 70% in sheep dependant on the virus strain; the strains involved in the Northern European outbreak are relatively mild, but preliminary figures still suggest up to 30% mortality.

Bluetongue does not affect humans and there is no risk of the disease being contracted or spread through meat or milk.

Vaccination

Over summer 2008 developments on the continent and elsewhere in GB increased the risk to Scotland from BTV8. It became apparent that the best way to protect

Scottish livestock was by initiating a compulsory vaccination campaign. The whole of Scotland was declared a BTV8 Protection Zone in November 2008 in order to allow the vaccination campaign to begin.

To date, there is no vaccine licensed for use in the UK against BTV1.

Movement Restrictions

Should BTV1 or any other non-BTV8 strain of bluetongue reach Scotland, the main control response under current legislation is to restrict the movement of live animals and genetic material. This would be achieved by declaring a Restricted Zone, separate from but overlapping with the current BTV8 Protection Zone and comprising a Protection Zone of at least 100km around an infected holding and a Surveillance Zone at least 50km wider than the protection zone. The protection zone may include within it a 20km Control Zone around the infected holding. Within the entire 150km restricted zone restrictions on animals, semen, ova and embryo moving out of the zones are put in place.

Given the size of the legally required restricted zone, it is possible that an outbreak of a strain other than BTV8 elsewhere in the UK may trigger the requirement for a restricted zone within Scotland and vice versa.

Due to the vector-borne nature of the disease, widespread slaughter would not be used to control bluetongue. However, where there is no evidence of circulating virus, any imported animals or other small group of animals shown to be infected with any strain of bluetongue may be slaughtered to prevent further spread of the disease.

Compensation would not be paid for animals slaughtered for disease control that became infected before being imported from another country, or for infected animals slaughtered voluntarily for welfare reasons. Compensation may be paid for other animals compulsorily slaughtered as part of disease control; however, the number of these is likely to be negligible.

Responding to the risk of disease

Bluetongue can be spread by vector movements in addition to animal movements; therefore eradication of the disease once it becomes established can be difficult if not impossible in the absence of a vaccine, unless aided by a significant period of cold weather. The emphasis for Scotland must be on keeping the disease out if possible and, if it should it reach our borders, dealing with it quickly and effectively before it can spread and become firmly established. There are two main routes by which bluetongue could enter Scotland:

Animal Movements

Movements out of a bluetongue Restricted Zone are allowed but are strictly controlled. There is also a requirement to notify Scottish Government within three days of an animal arriving in Scotland from a non-BTV8 restricted zone. As an

additional precautionary measure, all live ruminants imports from affected member states are blood tested on arrival. For further information see our website <http://www.scotland.gov.uk/bluetongue>.

Although rigorous adherence to the conditions of movement set out here will minimise the risk of spreading bluetongue, it cannot fully guarantee that the animals being moved are disease free. In addition, given the vector-borne nature of the disease, there is no guarantee that disease has been confined within zone boundaries; silent spread into the surrounding areas is a possibility. Wherever possible you should avoid moving animals from high-risk areas to Scotland.

Windborne spread

Potentially, prevailing winds could spread infected midges from affected areas. Meteorological assessments are received daily, and provide a detailed analysis of any areas of the UK at risk from incursions. This information can be used to aid in targeting any further surveillance measures required.

What can I do?

- Be vigilant. Vaccination against BTV8 does not protect against other strains of bluetongue. The clinical signs of bluetongue are outlined below — please ensure that you are familiar with these and inspect your livestock regularly.
- If you suspect the presence of the disease, you must contact your local Animal Health office immediately.
- With your veterinary surgeon, plan how you might use insecticides and livestock housing to reduce exposure of your ruminant livestock to midges.
- Where possible, keep ruminant livestock away from low-lying damp land where midges are most active, particularly at dusk and dawn, which are the times of day when midges are most active.
- Cover or remove dung heaps that might provide breeding grounds for midges.
- Maintain good biosecurity.
- Think carefully before sourcing ruminants or camelids from areas at high risk of bluetongue.
- If you cannot avoid sourcing animals from these areas, find out their vaccination status and ensure that the required movement controls are implemented.
- Remember that all ruminant livestock imported from affected countries must be tested for bluetongue.

Clinical signs in sheep

- Fever.
- Swelling of the head and neck.
- Inflammation and ulceration of the mucous membrane of the mouth, nose and eyelids.
- Lameness.
- Muscle degeneration and blood/serum leaking from blood vessels into surrounding tissue.
- Haemorrhages in the skin and other tissues.
- Respiratory signs such as froth in the lungs and an inability to swallow.
- High mortality rate.
- Discolouration and swelling of the tongue (rare; see picture on front cover).

Clinical signs in cattle

Although bluetongue usually causes no apparent illness in cattle or goats, cattle **are** displaying clinical signs during the current outbreak in Northern Europe.

- Nasal discharge.
- Swelling and ulceration of the mouth.
- Swollen teats

Local animal health offices

Office	Telephone	Nightline	Fax	Email
Ayr	01292 291350	07000 780124	01292 291351	AH.Ayr@animalhealth.gsi.gov.uk
Galashiels	01896 758806	01896 758806	01896 756803	AH.Galashiels@animalhealth.gsi.gov.uk
Inverness	01463 253098	07000 780126	01463 711495	AH.Inverness@animalhealth.gsi.gov.uk
Inverurie	01467 626300	01467 626300	01467 626321	AH.Inverurie@animalhealth.gsi.gov.uk
Perth	01738 602211	01738 602211	01738 602240	AH.Perth@animalhealth.gsi.gov.uk

Further information

<http://www.scotland.gov.uk/bluetongue>

<http://www.defra.gov.uk/animalh/diseases/notifiable/bluetongue/index.htm>

