

BLUETONGUE



Advice for those working with ruminants



SCOTTISH EXECUTIVE

Introduction

Bluetongue is a notifiable midge-borne viral disease that can infect all ruminants, such as cattle, goat, deer and, in particular, sheep. Since August 2006, there have been widespread outbreaks of Bluetongue in Northern Europe. Bluetongue has been found within the EU before, but only in warmer Mediterranean countries (for example Spain, Portugal, and Italy). 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. In Southern Europe, midges are not normally active in temperatures below 15°C and winter usually prevents the spread of the virus in cooler climates. Given the nature of the disease, an outbreak in Northern Europe without obvious signs of gradual spread had not previously been expected.

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 banned from affected areas.

The symptoms of Bluetongue (details follow) 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 strain involved in the Northern European outbreak (BTV8) is 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.

Disease Control

Bluetongue is different from many other diseases 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.

Should Bluetongue reach Scotland, or elsewhere in the UK, under current legislation an infected area would be declared, comprising a protection zone of at least 100km around the infected holding and a surveillance zone at least 50km wider than the protection zone. The protection zone would include within it a 20km zone around the infected holding. Within the entire 150km infected area restrictions on animals, carcasses, semen and ova moving out of each of the three zones would be put in place. Additional housing requirements and requirements to control midges with insecticides may also be put in place within the 20km zone.

Given the size of the legally required infected area, it is possible that an outbreak elsewhere in the UK may give rise to such controls 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 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, unless aided by a significant period of cold weather. The emphasis for the UK, including Scotland, must be on keeping the disease out if possible and, if it should it reach our shores, dealing with it quickly and effectively before it can spread and become firmly established.

There are two main routes by which Bluetongue could enter the UK:

Animal Imports

Imports to the UK from infected areas are prohibited. As a precautionary measure all live ruminant imports from free areas in any affected country are being blood tested. Also as a precautionary measure, retrospective tracing and testing has been undertaken for all animals previously imported from any region within a Bluetongue surveillance zone, or from Italy, Spain or Portugal (previously infected areas), since 1st May 2006. All results received to date have been negative. This precautionary retrospective tracing and testing regime is constantly kept under review and is expanded as required in response to further outbreaks on the continent.

Windborne spread

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

How can I help?

- Be vigilant. The clinical signs of bluetongue are outlined on the next page – please ensure that you are familiar with these and inspect your livestock regularly.
- If you suspect the presence of the disease, 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; avoid the importation of animals from risk regions or those that have travelled through risk areas;
- Finally, remember that all ruminant livestock imported from affected countries must be tested for bluetongue. If you are buying imported cattle ensure that they have been tested.

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/Topics/Agriculture/animal-welfare/Diseases/SpecificDisease/bluetongue/bluetonguecurrent>

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



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