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BLUETONGUE QUESTIONS AND ANSWERS

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1. What is Bluetongue?

Bluetongue is a virus spread by insects which affects all ruminants, such as cattle, goats, deer and sheep. Clinical signs can vary by species – although symptoms are generally more severe in sheep, cattle can also show signs of disease (and can act as a reservoir for disease to keep infection circulating).

2. What types of Bluetongue are currently present in the EU?

Since August 2006, Bluetongue has been found in the Netherlands, Belgium, Luxembourg, in parts of Western Germany and in areas in Northern France. Since 1998 there have been widespread outbreaks of different strains of Bluetongue in Greece, Italy, Corsica and the Balearic Islands. Cases have also occurred in Bulgaria, Croatia, Macedonia and Yugoslavia. See the [map of Bluetongue outbreaks in the Netherlands, Belgium, Germany and France](#)

3. What is Bluetongue Serotype 8 (BTV8)?

There are at least 24 different varieties (serotypes) of the bluetongue virus (BTV). The serotype involved in the current outbreak of bluetongue in Northern Europe has been identified as serotype 8.

4. Is Bluetongue a notifiable disease?

Bluetongue is a notifiable disease. If you suspect disease then you should report this to your local Animal Health Office. **It is an offence not to report disease when suspected.**

5. What are the clinical signs in Sheep?

Clinical signs in sheep may include: fever; swelling of the head and neck; inflammation and ulceration of the mucous membrane of the mouth, nose and eyelids; lameness; muscle degeneration and leaking of blood or serum from blood vessels into the surrounding tissues; haemorrhages in the skin and other tissues; respiratory signs such as froth in the lungs and an inability to swallow; and a high mortality rate. Sometimes, although it is rare with BTV8, there may be some discolouration and swelling of the tongue.

Due to clinical signs, deaths of sheep in a flock may reach as high as 70 percent. The condition can lead to a reduction in meat and wool production in the animals that survive (although this is generally not observed with BTV8).

6. What are the clinical signs in Cattle?

Although Bluetongue usually causes no apparent illness in cattle or goats, cattle **are** displaying clinical signs during the current outbreak of BTV8 in Western Europe.

These have included nasal discharge, swelling and ulceration of the mouth and swollen teats.

7. Are any other animals affected?

Bluetongue affects all ruminants (cattle, goats, sheep, camels, llamas, giraffes, bison, buffalo, deer, wildebeest and antelope). There is no evidence of Bluetongue infection in any other species.

8. Does Bluetongue affect humans?

Bluetongue is an insect-borne viral disease which affects all ruminants, such as cattle, goat, deer and, in particular, sheep. Bluetongue does not affect humans.

9. How is the Bluetongue virus transmitted?

Virus transmission between animals occurs via an insect vector (midges of *Culicoides* species), when a midge bites an infected animal and passes the infection to an uninfected naive animal. Transmission of the virus during an outbreak therefore depends on continuing cycles of infection between infected animals and vector insects. Bluetongue cannot be naturally transmitted directly between animals.

10. What measures have been applied in the continent?

The affected countries have applied control measures as required under the EU Directive. However some derogations from movement restrictions have been implemented.

11. Are the European outbreaks related?

Testing on samples from the Northern European outbreak has shown they carried the serotype 8 form of the virus. The results show that the isolate is NOT descended from forms of the Bluetongue that have been recorded in many parts of southern Europe including Bulgaria, Italy, Corsica, Spain, and also in South Africa, in recent years. The gene sequence data points to an origin in sub-Saharan Africa.

12. What actions have been taken in the UK in response to the Northern European outbreak?

Defra has actively traced and testing animals imported from high risk areas to test for signs of disease incursion. The animals tested in the UK have revealed no positive tests.

Imports to the UK from restricted areas in the EU are prohibited and the UK has also banned imports from unaffected areas that have travelled through an infected area. As a precautionary measure all ruminant imports from non-restricted areas of all EU Member States are being blood tested.

Defra and Industry representatives have been working with the Met Office UK and the Institute for Animal Health, Pirbright to determine possible scenarios for the introduction of Bluetongue into the UK. This has focused on the possibility of the infected midges being blown from the continent to the UK, infected animals entering the country through legal trade from within and outside the EU, and the introduction of the virus through illegal imports of animals or contaminated biological products (e.g. bulls semen).

13. Were any livestock imported from the current restriction zone before disease was confirmed?

Yes. All animals imported from the current restriction zones since 31st May 2006 have been tested for Bluetongue, none revealed positive results.

14. What legislation currently exists?

The Bluetongue Order 2003 came into force on 19 February 2003, this implements Council Directive 2000/75/EEC concerning the control and eradication of Bluetongue. In Scotland, Wales and Northern Ireland similar legislation also exists.

15. What disease control measures would be put in place if Bluetongue was confirmed in the UK?

The default measures aimed at preventing disease spread involves restricting animal movement and vector mitigation.

- Veterinary investigation on suspect premises, and restrictions (including a ban on movement of susceptible animals on and off the premises).
- On Confirmation, restrictions remain in place and are extended to a zone of 20km radius around the infected premises (IP).
- Two wider zones must also be declared:
 1. The Protection Zone (at least 100km radius around an IP)
 2. The Surveillance Zone (at least 50km in radius beyond the PZ).
- Movement of susceptible animals out of these zones are banned (although animals can move freely within those zones) and we must implement surveillance programmes.
- We have some flexibility in demarcating the zones (with Commission agreement), but various factors must be taken into account.

16. What additional biosecurity steps would farmers be encouraged to undertake, if Bluetongue were confirmed in the UK?

The vector-borne nature of the disease (and distribution of vectors) ensures that the risk of disease spread can only be mitigated against to a degree (i.e. we cannot guarantee 100% protection from vectors).

The benefits of housing animals at times of the day when the midge vector is most active are unproven (at least in the context of BTV8). Treatment of midge breeding grounds e.g. manure heaps as well as using repellents and approved pour-on insecticides on cattle and sheep may reduce the risk of infection to some degree in certain circumstances.

In partnership with Defra and other industry groups, we will be issuing guidance on the likely effectiveness of such measures.

17. Will infected animals be slaughtered?

As Bluetongue is spread via vectors (i.e. midges), rather than from animal to animal, compulsory slaughter of ruminants infected with bluetongue would not normally form part of the UK control strategy although culling of infected animals in the first instance may be carried out in an effort to prevent the disease from getting into the local midge populations.

18. Would producers be able to export their livestock, if Bluetongue was confirmed in the UK?

Should Bluetongue be confirmed in the UK, exports of species susceptible to BT (including their semen, ova and embryos) out of the affected area would be restricted (subject to any derogations agreed with the Commission).

19. Can the livestock from the infected countries be exported to the UK?

Defra is not currently authorising any imports of animals from a BT restricted zone.

20. Can livestock be vaccinated against Bluetongue?

There are no Bluetongue vaccines currently authorised for marketing in the UK. Live attenuated vaccines were originally developed in South Africa for use on local breeds of sheep. These vaccines can cause clinical disease (which may be severe) in European sheep breeds. Live attenuated vaccines have been used in Europe, but this has led to their transmission in the field and reassortment between vaccine and field strains. We understand that inactive vaccines are currently being developed but they are not expected to be available in the short/medium term.

Under the Bluetongue Order 2003 the Secretary of State can authorize the vaccination of animals. This decision would be based on the efficacy of available vaccines, whether they are licensed for use within the EU, and the envisaged exit strategy if vaccination were to be used. Currently, no vaccines are suitable against the outbreak of BTV8 in Northern Europe.

21. What are the current surveillance measures undertaken in the absence of disease?

The following precautionary measures are being taken in the effort to keep disease out of the UK:

- All imports of susceptible animals from restricted areas in EU Member States affected by Bluetongue are currently banned.
- All susceptible animals from continental BTV free EU Member States or zones (not including Ireland) are post-import tested for Bluetongue (imports back to May 2006 were tested, and have all tested negative).
- Daily meteorological surveillance is undertaken to assess the risk of wind borne spread of vectors from BTV8 affected countries to the UK.
- In partnership with the Defra and other Industry groups we are encouraging vigilance and early reporting of disease amongst farmers and veterinary practitioners (Bluetongue is a notifiable disease and suspicion of disease must be reported).
- Defra is raising awareness of the disease through dissemination of information leaflets to farmers and vets, through adverts in appropriate publications, and publicity campaigns at livestock markets etc.

22. How far can a midge infected with Bluetongue travel?

The species of *Culicoides* midge which has acted as a vector for disease in the current North European outbreak, are different from the species which have traditionally acted as the vector in Southern Europe and Africa.

From initial studies it can be roughly estimated that a midge can travel up to 1.5 – 2 km per day in a local area. However, if caught in suitable meteorological conditions

midges can be carried much further, especially over water masses i.e. more than 200 km. All of these details are an approximation and vary according to local environmental, topographical and meteorological conditions.

23. What can I do?

Monitor your stock carefully

To remain vigilant for Bluetongue you should inspect your stock, particularly focussing on the (mucous linings), lining of the mouth and nose and the coronary band (where the hoof stops and the skin starts), and;

If you suspect one of your animals has Bluetongue, it is vital to report it as early as possible. Telephone your nearest Animal Health Office immediately. To find out the telephone number of your nearest office, call the Defra helpline on: 08459 335577, or visit the Defra website at: www.defra.gov.uk