

Bluetongue Disease FAQs

1. What is bluetongue disease?

Bluetongue (BT) is a notifiable, viral disease of domestic and wild ruminants, such as cattle, sheep, goats, deer etc. The virus is transmitted by biting midges (*Culicoides* species), that are most active between April and November in Ireland. As the presence of the disease depends on the presence and activity of insect vectors, the disease is seasonal, mainly occurring between July and November in affected countries.

2. Is BT transmissible to humans?

Bluetongue does not infect humans and, consequently, the disease has no public health significance. There is no risk of the disease being contracted or spread through meat or milk.

3. Are there different strains of the virus?

There are currently 24 serotypes of BT worldwide, and strain variations exist within each of these serotypes. Five of these serotypes are currently present in Europe. In particular serotype-8 is of concern to Ireland, due to its geographical closeness (present in France), and also because the insect vector species that transmits serotype-8 are present in Ireland. Therefore if serotype-8 ever entered Ireland it could firmly establish itself in the insect vector population, making BT eradication more difficult.

4. Have there been any cases of BT reported in Ireland?

Bluetongue has never been detected in Ireland. However as Ireland has the vectors that transmit BT, we need to remain vigilant to the threat it poses to cattle and sheep here.

5. What countries are affected by BT?

There are currently a number of European countries affected by BT (Fig 1.). A previous European BT epidemic in 2008-2009, affected many northern European countries, including: United Kingdom, Belgium, Netherlands, Denmark, Luxembourg and Sweden reporting cases.

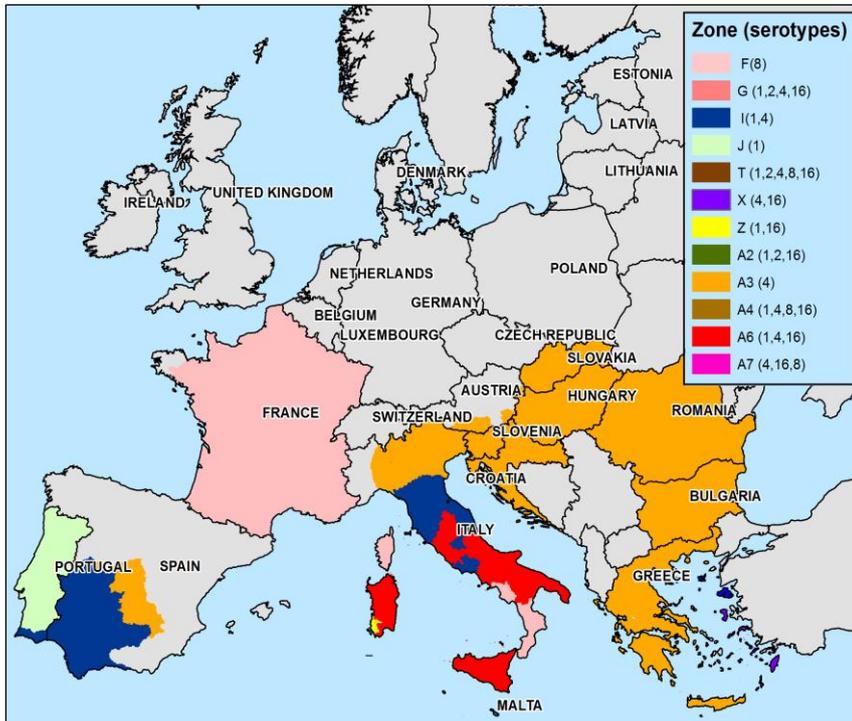


Fig 1. European Union countries with BT disease restriction zones as of June 2017. Each affected region is coloured based on the serotype (or serotypes) that have been recorded. The latest EU bluetongue restriction zone map can be found at: https://ec.europa.eu/food/sites/food/files/animals/docs/ad_control-measures_bt_restrictedzones-map.jpg

6. What are the symptoms of bluetongue disease?

In many herds or flocks, only one or two animals may be affected. Currently in Europe many infected animals are remaining asymptomatic, with diagnosis occurring solely through BT surveillance testing. In general acutely infected sheep are more likely to show clinical signs than acutely infected cattle or goats. The following list summarises the clinical signs that might be seen in an acutely infected animal:

Cattle:

- Nasal discharge
- Swelling and ulceration of the mouth
- Swollen teats
- Tiredness
- Conjunctivitis
- Reddening of the skin

Sheep:

- Fever
- Swelling of the head and neck
- Lameness
- Mouth and nose ulcerations
- Drooling
- Haemorrhages in the skin and other tissues
- Respiratory problems
- High mortality rate
- Discolouration and swelling of the tongue

7. Who should I contact if I suspect bluetongue in my herd or flock?

Bluetongue is a notifiable disease under EU and Irish National legislation. If you suspect your animals may be affected you must contact your private veterinary practitioner or notify the Department of Agriculture, Food and the Marine immediately by contacting your local Regional Veterinary Office (<http://www.agriculture.gov.ie/contact>) or by calling **1850 200456**.

8. How do cattle and sheep get infected?

The virus is mainly transmitted by insect vectors (biting midges of the *Culicoides* species), although transplacental transmission (i.e. from the dam to the calf in utero) has also been recorded in cattle in the case of BT serotype 8. Bluetongue is not shed into the environment, so cleaning and disinfection procedures will not control its spread. The midges that spread infection are most active between April and November in Ireland and are commonly found around farms. Of the 16 most common midge species in Ireland, at least 8 are potential vectors for BT. They feed on livestock mainly in the hours around dusk and dawn but, if conditions suit, they can be active almost 24 hours a day under Irish weather conditions. Infection is transmitted when an uninfected midge takes a blood meal from an infected sheep or cow. If temperatures are high enough (high 20's °C for several days) the virus will develop inside the midge, and be transmitted when the midge feeds on a new host. With the arrival of cooler autumn or winter weather, midge activity and virus transmission will cease. The virus may survive over the winter, but the mechanism for this is not fully understood, and disease may reappear the following season after midge activity has recommenced.

9. How could BT get to Ireland?

- Importing an animal that is carrying the virus in its blood is the most likely route of introduction to Ireland. If this animal was bitten by the right kind of midge and the environmental conditions were favourable, the midge could transmit infection to other animals.
- The second route of introduction is less likely but could occur if infected midges were blown to Ireland from another country such as France or the UK. Again the environmental conditions would have to favour survival of the midges and allow transmission.
- Another though less likely route of introduction is through the importation of infected semen or other biological products.

10. What is the Department doing to prevent BT getting in to Ireland?

Current measures in place by the Department to prevent BT entering Ireland include:

- All susceptible animals coming from BT affected countries, or travelling through BT affected countries on their way to Ireland, are sampled for BT within 1 week of arriving in Ireland. Until results are available susceptible animals must be kept inside and separated from other animals. They must also be treated with an approved insecticide.
- Other BT active surveillance programs are in place which involve testing a selection of Irish cattle and deer populations for the presence of BT.
- The Department closely monitors the European BT situation, with a view to monitoring the risk to Ireland of a BT incursion.
- An ongoing awareness programme for BT is in place to ensure that keepers, practitioners and other stakeholders are aware of the clinical signs of BT, the requirement to notify any suspicion of disease without delay and the current situation with the disease in neighbouring countries and other European countries.
- The Department works with Met Éireann on an early warning system for *Culicoides* midge incursions from the UK or France.

11. What can farmers and other stakeholders do to prevent BT getting into Ireland?

- Do not import ruminant animals from BT restricted areas in Europe unless absolutely necessary.
- Seek assurances in addition to the requirements set out in Regulation 1266/2007 (EU rules for the control of Bluetongue) to ensure that animals are not infected with BT prior to departure, such as a recent negative PCR* test for BT carried out in an accredited laboratory.
- Do not buy or accept animals which have been recently imported without carefully checking their origin and health status.
- Post importation, keep any imported animals isolated and indoors until they have been tested for BT by staff from this Department and have returned a negative test result (see below).
- Be vigilant; report any suspicion of disease to your private veterinary practitioner or the Department of Agriculture without delay.

12. How is bluetongue controlled if it is detected here?

The EU and national legislation to deal with the control of BT broadly follows the arrangements in place for other diseases such as Foot and Mouth Disease and Avian Influenza etc., but are more extensive given the disease is spread by insect vectors. The measures for BT include:

- Establishment of Control (20km), Protection (100km) and Surveillance (150km) Zones around the infected holding.

- Movement restrictions within and from these zones.
- Confinement of animals indoors at times when the insect vector is active.
- Control / eradication of the vector by destruction of habitats and use of insecticides.
- Slaughter of infected / suspected animals, only if necessary to prevent spread of the disease, with destruction of carcasses.
- Vector monitoring (light traps).
- Vaccination.

13. How can I protect my animals against BT disease if the disease is detected here or if the risk is significantly high?

Measures similar to those implemented in the restriction zones can help to protect all livestock from BT including:

- Housing at risk periods which are when the *Culicoides* are most active, typically around dawn and dusk. Also most midge species will avoid entering buildings.
- Reducing the midge population around the farm by draining any wet or boggy land around farm buildings. Also regularly removing dung and storing it away from animal housing will help also.
- The use of insecticides on susceptible livestock may be useful, but their efficacy against *Culicoides* species has not been well studied.
- Also the use of insect repellents for animal housing and transport vehicles may be useful as well.

14. Can I vaccinate my animals against BT now?

No. Vaccines against a number of BT serotypes exist. However the option to vaccinate for BT is not available to farmers in Ireland at the moment. However this situation is kept under constant review.

15. Is vaccination against BT available in the UK?

In Great Britain BT serotype-8 vaccine has been available since mid-July 2016 and the authorities there have encouraged farmers to consider vaccination against BT. This is because of the relatively higher risk of an incursion there. However the final decision to vaccinate is left to the farmer, in consultation with their private veterinary practitioner.

Bluetongue vaccination is not permitted in Northern Ireland at the moment.

16. Why should I be concerned about BT?

The movement of cattle or sheep would be controlled within and from the restriction zones, including the 150km surveillance zone, and exports of live animals would be subject to

restrictions. Controls would be kept in place until there is no further risk of spread, but may be relaxed during the period when the insect vectors are not active (the vector free period). However the loss of BT free status may have a very significant affect on Ireland's ability to trade with countries outside the EU.

Further information:

<http://www.agriculture.gov.ie/bluetongue/>

**PCR or polymerase chain reaction is a technique used in molecular biology to detect virus genome in this case. A test for BT is usually carried out on blood. A positive PCR test essentially means that the virus is present in the sample tested.*