



International Animal Health Division

International Animal Disease Monitoring

Preliminary Outbreak Assessment



Ref: VITT 1200/BT – North-West Europe

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Bluetongue in North-West Europe – New Developments

Note: Defra's International Animal Health Division (IAHD) monitors outbreaks of high impact diseases around the world. Bluetongue (BT) is among those diseases of major concern.

1 Disease Report

This update builds up on our previous preliminary assessment

(<http://www.defra.gov.uk/animalh/diseases/monitoring/pdf/bt-nweu070906.pdf>).

The outbreaks of bluetongue in the Netherlands, Belgium, France and Germany continue to spread, mainly within the previously affected areas but also include some new adjacent areas (For daily updates, please refer to the following Defra website -

<http://www.defra.gov.uk/animalh/diseases/notifiable/pdf/bt-europemap.pdf>).

2 Situation assessment and commentary

2.1 Intra-Community trade

The affected member states have implemented EU rules for disease control. These measures are designed to mitigate the risk of the disease spreading by legal trade in live susceptible animals and their products.

Recent detections indicate that the disease has spread mainly eastwards from the initially affected areas. However, some westward and, to a very limited extent, southwards spread has also been noted.

Tests carried out on cattle and sheep imported from the affected EU Member States to the UK since 1 July have given negative results. Therefore, there is a low likelihood that the disease may have been introduced by movement of domestic cattle or sheep prior to the detection of this outbreak by any consignments from areas now under restriction. However, our understanding of the epidemiology of the disease on the continent continues to develop as new information comes forward. The need for further tracings of imported susceptible animals is therefore continuing, subject to review.

2.2 Climatic conditions

One of possible ways that may contribute to the spread of the disease is by insect vectors. Therefore, this assessment considers whether the possibility of the chance windborne movement of the vector insects to the UK over relatively long distances has been increased as a result of these developments. Our previous assessment suggested that the likelihood of the disease being introduced into the UK by infected wind-borne midges would depend on weather conditions in the affected area adjacent to the UK.

When considering a possibility of the BTV being introduced to the UK by competent vectors, two things should be taken into account. Firstly, whether any midges are infected with the virus and the level of infection in the midge population, and secondly, whether any infected midges could be transported by wind to the UK.

To assess the possibility of whether insect vectors (regardless of whether infected or not) might reach the UK, the meteorological conditions (wind speed and direction) over the infected areas are being monitored by the Met Office, UK, and the Institute for Animal Health, Pirbright, UK. The possibility of local area spread in the currently affected member states appears to be likely, although detailed modelling is required to confirm this.

With regard to assessing the risk of vector insects arriving from the currently affected areas to the UK, a worst case scenario scheme was designed and used for the period 1 July to date (Gloster. J. – personal communication by e-mail, September 2006). As the number of infected midges is unknown a standard release of model particles has been assumed and as such the modelling results must be treated with caution. A worst case scenario based on midges becoming airborne at Oostende on the Belgium coast where no outbreaks have so far been recorded suggests that the overall risk to the UK remained very low during September. Nevertheless, this again highlights importance of maintaining high vigilance in the areas of the UK considered to be at risk.

Nevertheless, the meteorological conditions are being assessed on a daily basis and the output is being forwarded to Defra on a regular basis for the ongoing assessment of the risk.

3 Conclusions

The outbreaks of BTV-8 in the affected areas of the Netherlands, Belgium, Germany and France are a significant development in the epidemiology of the disease in the EU. This type of the BT virus has never been recorded before in Europe. Further developments are likely to continue and new cases may be reported in the currently affected areas.

It is unlikely that infected competent adult vectors will survive the winter. However, should the BT virus manage to survive either in a vector or a susceptible host over the winter period, then fresh outbreaks may be expected next year when the population of adult vectors begin to rise.

Although recent developments suggest an incremental increase of the risk of BT introduction to the UK, the overall risk is currently considered to be low. A low possibility of the introduction of the virus by infected midges being blown to the UK still exists, however, this is expected to decline further as temperatures and vector populations decline with the start of the autumn/winter period.

IAHD continues to monitor developments and re-assess the situation.