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BLUETONGUE IN PORTUGAL

AND

AN UPDATE ON BLUETONGUE

IN

SPAIN

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1 Summary

Portugal has reported four outbreaks of BT at Campo Maior in the Elvas region of Portolegre province and Alandroal in the Alantejo region of Évora province. This is in the area close to the Spanish border that is already under restriction due to the recent BT outbreaks in Spain. There is no information of the spread of the disease to the rest of Portugal. This assessment concludes that the risk of introduction of disease from Portugal before and during the current situation is negligible.

This report also assesses the developing situation in Spain with regard to the detection of bluetongue virus (BTV). It is a follow up to the two previous qualitative risk assessments by Defra released on 15 October 2004 (http://www.defra.gov.uk/animalh/diseases/monitoring/pdf/bt-spain.pdf) and 22 October 2004 (http://defraweb/animalh/diseases/monitoring/pdf/bt-spain1.pdf).

Epidemiological information indicates that BT virus (BTV4) continues to be detected in several provinces in Andalucia and Extremadura. These provinces are within the established protection and surveillance zones. There is no evidence of any spread of the disease to the rest of Spain.

This assessment identifies no change in the risk of introduction of disease from Spain to the UK during the outbreak. This is in line with the previous assessments, which concluded that the current risk of introduction of disease from Spain to the UK was negligible.

Spain notified onward movements of susceptible animals to Portugal, France and Italy. These movements took place before the outbreak was detected. In response to information on onward movements of susceptible animals, the UK TRACES Risk Messaging System (TRMS) required that any consignments of susceptible species, and their germplasm, originating from non-restricted BT areas in Portugal, Spain and Italy, be subjected to a heightened level of post-import checks. The same applied to imports from France. This requirement no longer applies to France given that all onward consignments of susceptible animals have now been traced and found to pose no risk for the disease spread. The UK TRMS has been updated accordingly.

It is of concern that other competent vectors, besides *C. imicola,* are present in other parts of Europe. This means that greater areas of Europe may be at risk of being affected by BTV.

The Veterinary Directorate continues to monitor the situation and will re-assess the risks if new information becomes available.

2 BLUETONGUE VIRUS (BTV) IN PORTUGAL

2.1 Disease report

On 24 November 2004, the Portuguese authorities notified two outbreaks of bluetongue (BT) in the region of Évora. On 25 November, a further two outbreaks were reported from the Evora and Elvas regions. These regions are close to the Spanish border and within the restricted (protection and surveillance) zones that were established in response to the recent BT outbreaks in Spain (Fig. 1).

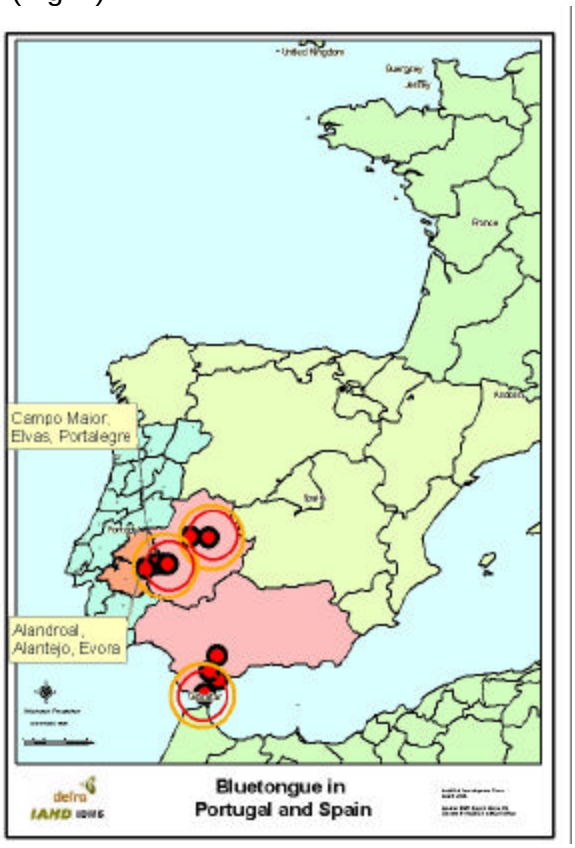

Figure 1: Location of bluetongue outbreaks in Portugal and Spain (November 2004).

3 AN UPDATE ON BLUETONGUE VIRUS (BTV) IN SPAIN

3.1 Current situation

During the meeting of the EU Standing Committee of Food Control and Animal Health (SCOFCAH) on 11 November 2004, Spain reported that 104 outbreaks in total had been confirmed so far. All of these were within the restricted (protection and surveillance) zones in the autonomous communities of Andalucia and Extremadura. Spain continues to provide an update on new

outbreaks to the EU and other Member States on a weekly basis. As of 15 November 2004, the number of confirmed cases stood at 122.

Spain considers that the most probable origin of the disease is the introduction of the virus from Morocco where initial outbreaks were reported in September. The EC (and the World) Reference Laboratory for BT (Institute for Animal Health, Pirbright, UK) confirmed that the isolates from Morocco and Spain both belong to the BTV serotype 4. Further analysis revealed that these isolates differ from the BT V4 isolates obtained from outbreaks in Sardinia (Italy) and Corsica (France) during the last year.

Spain has decided to use BTV 4 vaccine produced in Italy and South Africa to control the disease in sheep and prevent losses due to clinical signs and mortality. EU rules permit affected Member States to use a vaccination programme approved by the Commission.

3.2 Background

BT is an arthropod-borne disease of ruminants. Disease transmission is mainly via blood-sucking midges (genus *Culicoides*). The disease does not affect humans. Detailed information on the disease can be found at Defra's website:

http://defraweb/animalh/diseases/notifiable/disease/bluetongue.htm#eu

Bluetongue virus (BTV) infection was initially detected in sentinel cattle on 13 October in Cadiz, Andalucia. Further cases have been reported in three sheep flocks located in the province of Caceras (southern Spain) and a cattle farm located in the province of Badajoz close to the border with Portugal. The disease spread was attributed to movement of infected animals before the outbreak detection.

Following the index case on 13 October, the Spanish authorities intensified serosurveillance in Andalucia, including increased vector monitoring (more traps in risk areas) and reinforced vector control (disinsection). These activities have now been extended to the autonomous community of Extremadura following detection of subsequent outbreaks during October.

Spain identified that consignments of sheep were sent to Italy, France and Portugal for slaughter, and 11 consignments of sheep were sent to Portugal for breeding during October. These consignments have now been traced and found to pose no risk for the disease spread.

4 LEGAL TRADE

4.1 Portugal

4.1.1 Situation before BTV detection

Available information indicates that the UK has not imported risk commodities (live animals and their germplasm) from Portugal during the past six months .

4.2 Spain

4.2.1 Situation before BTV detection

Available information indicates that the UK has not imported risk commodities (live animals and their germplasm) from Spain during the past six months. Trade before the initial detection of BTV in Spain on 13 October was outlined in detail in the qualitative risk assessment released by Defra on 15 October 2004 (http://www.defra.gov.uk/animalh/diseases/monitoring/pdf/bt-spain.pdf)

4.2.2 Situation after BTV detection

The scope of Defra's risk assessment was extended to include consideration of further outbreaks and the movement of animals of susceptible species from Spain to Portugal, France and Italy. The trade situation was outlined in detail in the qualitative risk assessment released by Defra on 22 October 2004 (http://defraweb/animalh/diseases/monitoring/pdf/bt-spain1.pdf).

5 BLUETONGUE RESTRICTIONS

5.1 Portugal

The Portuguese authorities have applied BT control measures (a 100 km protection zone, within a 150 km surveillance zone) as required under national and European legislation. These measures include quarantine of the affected holding, destruction of the flock, control of arthropods and wildlife reservoirs, movement control, surveillance and zoning.

5.2 Spain - current situation

EU safeguard measures now apply to prevent exports of susceptible species and their germplasm from the affected provinces in Andalucia and Extremadura.

5.3 European legislation - summary

5.3.1 Live animals

Member States affected by BT outbreaks must apply EU rules in setting up protection and surveillance zones around outbreaks. EU rules require Member States to control the disease according to a plan approved by the Commission. This may include vaccination outside the restricted zones.

An affected Member State must prevent trade in susceptible live animals from restricted zones (protection and surveillance zone), unless it is proved that animals come from areas within that area that are free from virus circulation or vectors. The Member State must carry out surveillance based on clinical signs and monitoring of sentinel cattle and the vector population according to a plan approved by the Commission.

EU rules allow movement of live animals within the affected areas provided they originate from a herd vaccinated according to an official vaccination programme. However, this requirement is dependant on the demonstrated effectiveness and efficiency of the surveillance system to indicate the presence or absence of specific BTV serotypes. Live animals may also move directly for slaughter provided they m eet specific requirements related to surveillance and vector control.

5.3.2 Germplasm

EU rules for semen require that the approved collection centre and the donor animals are not subject to any animal health restrictions.

EU rules for embryos require that an approved embryo collection team carries out collection and that the holding of the donor females is not subject to any animal health restrictions.

5.3.3 Meat and meat products

EU rules do not apply any restrictions in relation to meat or meat products.

5.3.4 Blood and blood products for pharmaceutical use

Intra Community trade in blood and blood products for pharmaceutical use is not subject to border inspection controls or electronic notification of consignments. Veterinary pharmaceuticals are subject to specific regulation under EU rules which ensures that safe raw materials are used and that the final product is safe for use in animals.

6 VACCINATION POLICY

Vaccines are not currently available for all BTV serotypes. Monovalent vaccines against several serotypes are available or can be produced at short notice but do not provide cross-protection against other serotypes. A polyvalent vaccine is available but its safety in the European context has not been evaluated.

There are no BT vaccines approved at EU level. EU rules require affected Member States to use vaccination programmes approved by the competent authority. Thus, affected Member States may use specified BT vaccines as a part of their officially approved vaccination programme.

There is currently no information from Portugal suggesting that emergency vaccination will be used. Spain has already decided to use BTV 4 vaccine produced in Italy and South Africa to control the disease and prevent losses due to disease and mortality in sheep.

7 BT VECTORS

BT is transmitted mainly via blood-sucking midges (genus *Culicoides*). The presence of this midge in Portugal and Spain (Fig. 2) is well documented (Tatem and others, 2003; Dallas and others, 2003).

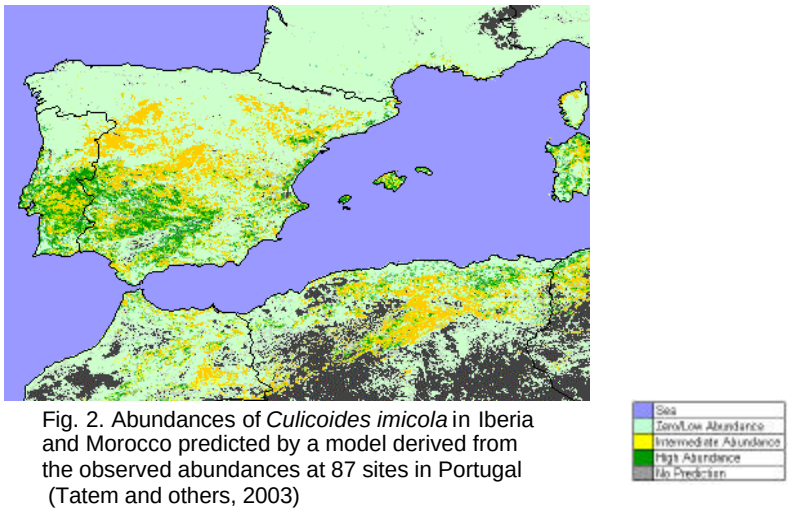

Fig. 2. Abundances of *Culicoides imicola* in Iberia and Morocco predicted by a model derived from the observed abundances at 87 sites in Portugal (Tatem and others, 2003)

These findings are consistent with the previous work which suggested that rising temperatures may make parts of eastern Spain, southern France, northern Italy, northern and southern Greece and the coastal regions of Albania, Montenegro, Bosnia-Herzegovina and Croatia become suitable for *C. imicola* (Wittmann and others, 2001).

C. imicola is now known to be widely distributed across southern Europe and may be expanding its range northwards in response to climate change. Recent findings have also implicated *C. obsoletus* and the *C. pulicaris* group of midges as probable vectors. These species are widely distributed throughout Europe as far north as Scandinavia but their ability to transmit BTV is poorly understood, although some populations with competence levels equivalent to the traditional vector *C. imicola* have been identified in the UK. The recent discovery of novel vector species of *Culicoides* in Europe and their varying levels of vector competence suggests that many if not most *Culicoides* species that bite domestic livestock should be regarded as being *potential* BTV vectors until comprehensive testing has been undertaken to confirm this status (Mellor and Baylis – personal communication, 2004)

The major Old World vector of BTV, *C. imicola*, has been shown to be widely distributed across southern Europe. Evidence suggests that its range may be extending northwards, possibly in response to climate-change (Mellor and Wittmann 2002; Conte *et al* 2003).

8 ASSESSMENT OF THE RISK TO THE UK

Based on current information on the presence of BTV in Portugal and southern Spain, the Veterinary Directorate presently considers that with regard to:

8.1 Legal trade in live susceptible animals

8.1.1 Portugal

The risk before the outbreak is considered to be:

- Negligible as there were no imports of susceptible animals in the past six months.

The current risk is considered to be :

- Negligible as control measures under EU rules prevent exports of animals from the affected areas.

8.1.2 Spain

The current risk is considered to be:

- Negligible as control measures under EU rules prevent exports of animals from the affected areas.

Comment: All onward consignments of susceptible animals from Spain to France, Portugal and Italy have now been traced and found to pose no risk for

the disease spread. The UK TRACES Risk Management System (TRMS) has now been updated to remove requirement for intensified post-import checks on any such imports from France.

8.2 Germplasm

8.2.1 Portugal

The risk before the outbreak is considered to be:

- Negligible as no imports of germplasm from susceptible animals occurred for the past six months.

The current risk is considered to be :

- Negligible as control measures under EU rules prevent exports of germplasm obtained from animals in the affected areas.

8.2.2 Spain

The current risk is considered to be:

- Negligible as control measures under EU rules prevent exports of germplasm obtained from animals in the affected areas.

8.3 Meat/meat products from susceptible animals

The risk from any imports of these commodities from Portugal and Spain is considered negligible because BT is not transmitted by meat/meat products, but by blood-sucking midges.

8.4 Blood/blood products for pharmaceutical manufacturing

The risk from any imports of these commodities from Portugal and Spain is considered negligible given the epidemiology of the disease, the controls applied by the industry and the limited extent of the outbreak.

8.5 Vaccination policy

A recent review of literature on BT by the EC (and the OIE) Reference Laboratory for BT (Mellor, P. and Baylis, M. - Institute for Animal Health, Pirbright, personal communication, October 2004) raised some concerns on the use of live BT vaccine. These concerns are primarily related to a great level of uncertainty on whether viraemia caused by vaccine strains may extend beyond 30 days at levels that may be undetectable by traditional

isolation methods and to what extent live attenuated vaccine may contribute to the virus spread.

8.6 Vectors

It is considered unlikely that *C. imicola*, the main vector of BT will become established in the UK. However, recent studies provided evidence that other vector species of *Culicoides* also occur in Europe (i.e. midges of the *C. obsoletus* and *C. pulicaris* species groups) from which multiple isolations of BTV have been made in the field (Savini *et al* 2003). The midges of these groups are also known to be present in the UK.

9 CONCLUSION

Portugal has reported four outbreaks of BT in the area close to the Spanish border. This area is already under BT restriction due to the recent outbreaks in Spain. This assessment concludes that the risk of introduction of disease from Portugal before and during the current situation is negligible.

Epidemiological information indicates that BTV4 continues to be detected in several provinces in Andalucia and Extremadura. These provinces are within the established protection and surveillance zones. This assessment identified no change in the risk of introduction of disease from Spain to the UK during the outbreak. This is in line with the previous assessments, which concluded that the current risk of introduction of disease from Spain to the UK was negligible.

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It is of concern that other competent vectors, besides *C. imicola,* are present in other parts of Europe. This means that greater areas of Europe may be at risk of being affected by BTV.

The Veterinary Directorate continues to monitor the situation and will re-assess the risks if new information becomes available.

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