

Maisons-Alfort, 15 November 2006



OPINION

of the French Food Safety Agency (Afssa) on vector inactivity within the context of bluetongue

Terms of the mandate

The Agence française de sécurité sanitaire des aliments (Afssa) [French Food Safety Agency] received a mandate on 06 November 2006, as part of its scientific and technical support service, for an opinion on different issues concerning entomological surveillance in the context of bluetongue, and in particular on determining the cessation of vector activity. The joint emergency expert group on "Bluetongue" was charged with conducting an expert review of these issues.

Opinion of the joint emergency expert group on "Bluetongue"

The joint emergency expert group on "Bluetongue", appointed in a decision dated 09 September 2006, met on 07 and 14 November 2006 and has issued the following opinion:

"Context"

The Directorate General for Food (DGAI) consulted Afssa, as part of its scientific and technical support service, regarding issues concerning entomological surveillance and more specifically the determination of the cessation of vector activity, in the context of the proposal that "on the cessation of vector activity in north-eastern France, the protection and surveillance zones will be grouped into a single restricted zone within which the free movement of ruminants will be permitted, as has been done in neighbouring Member States."

Questions

The joint emergency expert group on "Bluetongue" was asked to:

- 1. define the practical modalities for determining the cessation of culicoides activity in the restricted zone in north-eastern France, notably the species to be considered (all culicoides species or only culicoides belonging to the Obsoletus complex) and the number of successive negative weekly trappings,*
- 2. propose a method for establishing the French regions "free" of culicoides (need for trappings spread throughout the country or extrapolation from data already available for the country),*
- 3. assess the risk of spreading bluetongue during movements of animals for immediate slaughter from restricted zones in bluetongue-free areas near the end of the predictable period of vector activity (end November).*

Method

Following the meeting of 07 November 2006, the joint emergency expert group on "Bluetongue" produced a draft opinion which was discussed on 14 November 2006 and validated on 15 November 2006.

The review was conducted based on the following documents:

- Commission Decision 2005/393/EC and its subsequent amendments (the most recent dated 13 October 2006),
- the available data on the epidemiological situation in the Netherlands, Belgium, Germany (EFSA BTV working group, data updated on 13 November 2006, DEFRA on 10 November 2006, European Commission ADNS declaration system on 10 November 2006),
- the available data on the epidemiological situation in France on 14 November 2006,
- Temperature records for the départements of north-east France on 14 November 2006,
- Entomological surveillance data in the north-east, south-west and south of France available on 14 November 2006.

Examination of the issues

This opinion from the joint emergency expert group on "Bluetongue" is based on the review carried out in preparation for Opinion 2006-SA-0307 (to be completed this week) on the risk of the development of bluetongue in Northern Europe in the next few months, particularly as regards the merger of the surveillance and protection zones in the French section of European Union restricted zone F. For this reason, this opinion only covers the answers to the questions relating to entomological surveillance and the cessation of vector activity.

1. Practical modalities for determining the cessation of culicoides activity in the restricted zone in north-eastern France and a method for establishing the French regions "free" of culicoides (need for trappings or extrapolation from data already available)

- A number of different species of adult culicoides are developing throughout France outside their inactive period, which is when a temperature below 10°C is stably maintained (for at least 10 days) (Opinion 2006-SA-0250 ter).
- In view of the persistent uncertainties surrounding the identification of culicoides species capable of acting as vectors for serotype 8 bluetongue which might be present throughout France and the climatic conditions which lead to culicoides inactivity, it was thought preferable to single out two "zones seasonally free of culicoides", based on the duration and the mean intensity of winter conditions resulting in the inactivity of any culicoides found there.

On this basis, a south zone can be distinguished, including the Provence-Alpes-Côte d'Azur, Languedoc-Roussillon, Midi-Pyrénées regions and Corsica, together with the Départements on the Atlantic Coast, which could, if the climatic conditions conform to those habitually observed, be considered "seasonally free of culicoides" from early January to mid-March 2007, while the north zone, containing the other regions of mainland France, could be considered as such from early December to the end of March 2007. Traps distributed across these two zones could enable the accuracy of this estimate to be verified and, if necessary, provide a more objective view, in each of these zones, of the situation as regards culicoides populations during 2007.

In practical terms, traps, as they are currently used, collect a group of culicoides which are then identified and counted by species. Entomologists consider that two consecutive weeks of trapping with no culicoides being caught, of whatever species, or with only very few individuals caught, is enough to confirm the cessation of activity.

2. Assessment of the risk of bluetongue spreading during movements for (immediate) slaughter in bluetongue-free zones of animals (namely domestic ruminants in the meaning of Directive 2000/75/EC) from restricted zones near the end of the predictable period of activity.

- *The epidemiological situation within the French restricted zones is characterised by a very small number of cases (6 between 30 August and 14 November 2006).*
- *During 2006 in France, when viremic animals were transferred from infected zones in Belgium, Germany and the Netherlands, no spread of the virus was identified, even though these transfers were carried out with no particular precautions before the identification of bluetongue in neighbouring countries and in periods of the year highly favourable to the development of culicoides.*
- *The risk of bluetongue being spread during the transport of ruminants for immediate slaughter from restricted zones (so outside the prohibited zone) to the bluetongue-free zone can be estimated as follows:*
 - *The probability of having a viremic animal originating from zones in which circulation of the virus has not been demonstrated and in a period of vector inactivity is very low;*
 - *The probability that a culicoides midge could come into contact with an animal transported directly and slaughtered immediately after arrival during a period of vector inactivity is itself extremely low;*
 - *The probability that a culicoides midge which would have ingested the blood of a viremic animal during the period of vector inactivity could achieve a sufficient level of multiplication to become capable of transmitting the virus is extremely low.*

Consequently, the probability that a ruminant transferred for immediate slaughter, in accordance with the derogation conditions stated in Article 4 (notably in b, c and d)¹ of Commission Decision 2005/393/EC, could cause the spread of the virus, is the sum of the probabilities described above and can be estimated as nil to negligible, as long this transport is carried out during the period "seasonally free of culicoides" in the slaughter zone.

Key words: *bluetongue, cattle, sheep, culicoides "*

Opinion of the Agence française de sécurité sanitaire des aliments

These are the points of analysis which Afssa is in a position to provide in response to the questions asked on entomological surveillance in the context of bluetongue, in particular on determining the cessation of vector activity.

The Director General of the Agence française
de sécurité sanitaire des aliments

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¹ B) *the animals to be moved do not show any sign of bluetongue on the day of transport;*

c) *the animals are transported in vehicles sealed by the competent authority and moved directly to the slaughterhouse under official supervision;*

d) *the competent authority responsible for the slaughterhouse is informed of the intention to send animals there prior to transport and notifies the dispatching competent authority of their arrival;*