Updated Situation Assessment No.8

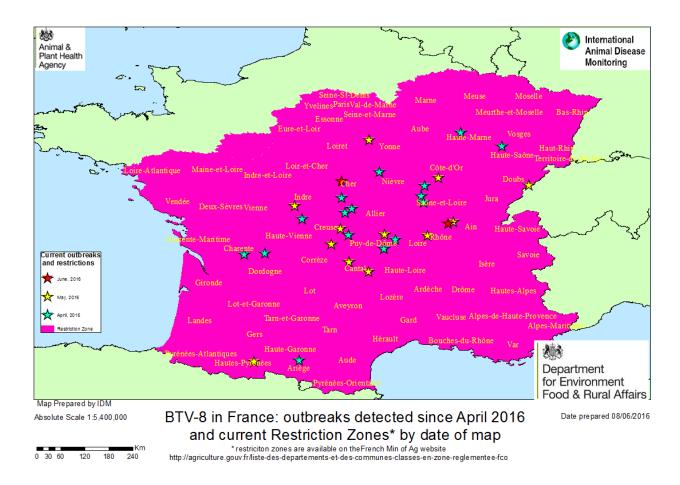
Bluetongue virus (BTV-8) in France

8th June 2016

Ref: VITT/1200 BTV-8 in France

Disease Report

France has now reported a total of 285 outbreaks of BTV-8, which is 13 new outbreaks since our last update in May 13th 2016 (OIE, 2016; see map). The restriction zones have not changed in coverage, but all of the seasonally free zones have been revoked (Ministère de L'Agriculture (FR) (2016)). All the recent outbreaks are in cattle holdings, detected by surveillance activities, although the likely date of infection is not clear. No increase in spread towards the north coast of France has been reported, but cases have been detected through surveillance towards the northerly area of the restriction zone.



Situation Assessment

The French authorities have reported on their recent surveillance activities (Bournier et al, 2016).

Between September 2015 and April 2016 a very high number of animals (nearly 80,000 animals, of which 99.7% were cattle) have been tested under the programme for testing animals to be moved out of the zone. Suspect clinical cases were reported in 570 farms during this same period, but only 13 farms had animals testing positive.

In addition, they have provided useful information on the small number of clinical cases on 11 of the farms which have been reported and this list is a translation:

For cattle (7 singleton animals from 7 individual farms) [Five of these animals had clinical features of BTV (discharge, irritation of the muzzle, stiffness of the limbs), 1 case was detected following an abortion (PCR positive result on the runt), 1 animal presented only general signs (hyperthermia, depression). One animal with clinical suspicion of BTV gave a positive PCR result but there was no information on clinical signs and the animal died a few days after visiting the vet]:

- Hyperthermia (5/7) and inappetance (4/7)
- Erosions on (5/7) or congestion of (4/7) the muzzle
- Conjunctivitis / lacrimation (4/7) nasal discharge (3/7), excess salivation (2/7)
- Facial Oedema (2/7) and cyanotic tongue(1/7)
- Difficulty in breathing [tachypnea, dyspnea, wheezing) (2/7)
- Problems with the limbs: stiffness (1/7), edema / congestion of the coronary band with limb edema (1/7). No lameness observed or inability to stand,
- weight loss / muscle wasting (1/7)
- congestion teat / udder (1/7)
- abortion (1/7) [the offspring also tested positive].

For sheep (4 animals from 4 farms) [Three of the animals showed clinical signs characteristic of BTV (discharge, irritation of the muzzle, face edema, salivation). One animal was detected following a series of abortions in the herd (6 abortions) with nervous signs / torticollis in new born lambs (which does not correspond to conventionally observed signs) and positive PCR results in the mother and the lambs, test results were negative for Schmallenberg virus]:

- Hyperthermia (3/4) and inappetance (1/4)
- Erosions on (0/4) or congestion of (1/4) the muzzle
- Conjunctivitis / lacrimation (1/4) nasal discharge (1/4), excess salivation (1/4)
- Facial Oedema (1/4) and cyanotic tongue(1/4)
- Difficulty in breathing [tachypnea, dyspnea, wheezing) (1/4)
- Problems with the limbs: stiffness (0/4), edema / congestion of the coronary band with limb edema (0/4); lameness observed (1/4),
- weight loss / muscle wasting (0/4)
- abortion (1/7) [the offspring also tested positive].

These types of clinical signs being seen are not pathognomic for BTV; they could be suggestive of a number of different diseases and causes. Overall, the number of detections of BTV following clinical suspicion is very low across all the mainland (3%) although higher within the centrally affected regions (Allier, Creuse, Loire and Puy-de-Dome). Although in 2007-8 the majority of outbreaks were reported as a result of clinical suspicion, only a small proportion of animals in each outbreak were actually clinically affected (Meroc et al., 2008; Durand et al. 2010 & Conraths et al., 2009).

Another item of interest in the report is about test results for the PCR positive tests. The Ct value for a PCR represents the number of PCR cycles required for the test to produce a positive result (above a threshold of detection), so the higher the figure, the lower the level of viral RNA present in the sample. Ct values varied between September and December at between 20 and 38. Values increased after January to between 30 and 35 and since April, most samples have a higher than 35 Ct value. This is particularly significant, as the likely infectivity of an infected animal decreases with a higher Ct value, so although cases are still being detected, they may not represent a significantly high risk of transmission of BTV at present. Current opinion is that an animal with a Ct value below 32 is viraemic and may be infectious.

https://www.zoetis.co.uk/news-and-media/bluetongue-vaccine-expected-mid-july.aspx

http://mrcvs.co.uk/en/news/14571/Bluetongue-vaccine-to-become-available

A batch of the bluetongue vaccines, Zulvac® 8 Bovis and Zulvac® 8 Ovis, is expected to become available to veterinary practices in mid-July. MSD Animal Health has signed an agreement with the Spanish-based biopharmaceutical specialist CZ Veterinaria SA (CZV), to distribute its bluetongue vaccine (BLUEVAC BTV8) throughout Great Britain.

For information, see the announcement by the NFU at www.nfuonline.com/bluetongue

https://www.zoetis.co.uk/news-and-media/bluetongue-vaccine-expected-mid-july.aspx

Conclusion

Our risk level remains the same, however the weather is starting to improve and as daily average temperatures increase in mainland France and the UK, so our risk level will start to increase. It is worth noting the variability of clinical signs when considering BTV as a possible differential diagnosis. BTV-8 is an unusual virus in the way it be transmitted transplacentally, therefore young animals born to positive dams / ewes may be viraemic and represent a source of new disease outbreaks, even if the adult animals have very high Ct values. We will continue to monitor the current situation in France and report any further updates from the French Authorities.

Vaccine has been made available for the UK market from July onwards, but the decision to vaccinate should be with the farmer, in consultation with their private veterinary surgeon.

Authors

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