

A THREE YEAR OVERVIEW OF BLUETONGUE IN THE NETHERLANDS

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Since August 2006, the Netherlands has been facing outbreaks of bluetongue (BT) caused by serotype 8 (BTV-8). In this first BT-season about 470 affected holdings were reported in the southern part of the country. It was believed that restrictions to animal movements slowed down the northwards spread of BTV. After a relatively mild winter, BT simultaneously resurfaced in July 2007 at many locations indicating that BTV-8 had survived well. Thousands of affected holdings across the country were reported during that year. After another mild winter, a vaccination campaign for serotype 8 was launched in May 2008, with massive vaccination of sheep, goats and cattle. In 2008, less than 150 outbreaks were reported. The reported BTV-8 cases were in the north-eastern part of the country where the level of natural immunity and the willingness to vaccinate were relatively low. This third year with outbreaks was followed by a cold winter. In 2009, no BTV-positive animals were reported from mid-March on. Based on a questionnaire, the willingness of farmers to (re)vaccinate animals tended to decline in 2009, but for cattle farmers this was still at an acceptable level. It is questionable whether farmers will (re)vaccinate again in 2010. Optimism is growing with respect to control, and possibly eradication of BTV-8, but re-emergence after a silent year is a serious possibility. One additional year of vaccination is thus probably required for eradication.

In September 2008, because of the enhanced risk of BTV-1 introduction, polymerase chain reaction (PCR) positive results were confirmed for BTV-8\net2006 by sequencing the amplicons of the serogroup-specific PCR test and by serotype-specific PCR testing. BTV-6 was found in infected animals in three different herds, irrespective of vaccination. The sequence of genome segment 10 of this virus is genetically close to BTV-2, whereas other segments are all close to those of the modified-live vaccine for

serotype 6. This suggests that BTV-6\net2008 is a reassortant of serotypes 2 and 6. Extensive monitoring and additional cases revealed an unusual epidemiology. No other affected animals were detected, but BTV-6 positive animals on a few additional farms were found. The distance between affected holdings was 30-50 kilometres, and there was no epidemiological link between the affected farms. All BTV-6 positive animals were PCR-negative in March 2009, with no new reports of BTV-6 infection.

In October 2008, a BTV-1 positive bull was officially reported one month after import. In the same herd, four additional PCR-positive animals were found. Three of these also originated from France and were positive for BTV-8. Detailed investigations revealed a French variant of BTV-8 never found in the Netherlands. We concluded that these animals were infected in France and that BTV-8 appeared to evolve differently in different regions in Europe. The fifth animal was positive for BTV-6 and was moved from the BTV-6 affected area. Since no other BTV-positive animals were found in the respective herds and in the one-kilometre radius zone, no spread of BTV-1, BTV-6 and BTV-8 seemed to have occurred in this area.

Furthermore, export of Dutch pregnant heifers began again in December 2008, with 2000 to 3000 animals per month. Export is allowed on the basis of vaccination (against serotype 8) before pregnancy and negative PCR testing. Since, no animals were found PCR-positive by the serogroup-specific PCR test, we concluded that the Netherlands was free of any BTV circulation in 2009. The situation in 2010 will show whether the Netherlands can be considered as BTV-free again.

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