

EZO 24

**Emerging of a vector-transmitted animal disease in Germany:  
The Bluetongue virus outbreak in north-western Europe in 2006/2007**

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Bluetongue virus (BTV) is a double-stranded RNA-virus of the genus Orbivirus that causes a non-contagious, arthropod-borne disease of domestic and wild ruminants and camelids. BTV is transmitted to its hosts by the bite of midges of the *Culicoides* spp. and can cause serious disease, particularly in sheep. BTV was never reported in any European country north of the Alps until August 2006, when outbreaks of BTV serotype 8 (BTV-8) were almost simultaneously discovered in Belgium, France, Germany and the Netherlands. In 2006, a total of 893 cases were detected in Germany, however, the source of initial virus introduction remains obscure. Subsequently, BTV-8 overwintered in the region, spread over most of the country and led to almost 20.000 new cases in 2007 in Germany. BTV-8-infections were also reported from additional European countries like UK and Switzerland.

Experimental inoculations of cattle and sheep with a German BTV-8 isolate resulted in infections with very mild clinical signs. However, BTV-8-genome could be detected by rRT-PCR for more than 200 days in blood samples of infected animals. Furthermore, epidemiological analyses revealed a high mortality and case fatality rate of the reported BTV-8-cases for infected sheep. Real-time RT-PCR analysis of midges caught with ultraviolet light traps demonstrated BTV-8-genome in several pools (up to 50 midges) of the *Culicoides* *obsoletus* complex. Therefore, indigenous common midges of the *Culicoides* spp. have to be considered as a competent vector system for BTV-transmission.

In conclusion, the epidemiological situation of the emerging BTV-8 epidemic will be presented and possible control strategies discussed.

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