

BULGARIAN NATIONAL BTV SURVEILLANCE PROGRAMME: FIELD STUDIES AND RISK ASSESSMENT IN 2009

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Bluetongue is a non-contagious, arthropod-borne viral disease of both domestic and wild ruminants. Bluetongue virus (BTV) is endemic in some areas where cattle and wild ruminants serve as reservoirs for the virus. Some authors suggest that a fundamental change in the European ecosystem since 1998, mostly linked to climate change, may have influenced the introduction and survival of BTV in Europe. Genetic analyses of bluetongue viruses isolated in Europe during this period showed that six virus types (1, 2, 4, 8, 9 and 16) have entered the region since that period. The aim of this presentation was to summarize the results of the National BTV Surveillance Programme, field studies, and risk assessment of BTV entry into Bulgaria in 2009.

As part of the Surveillance Programme of the disease in 2009, seroprevalence was performed in 19 sentinel BTV-seronegative animal herds, 7 of which were located in the western part of the country and the other 12 in the southern part, about 10 to 20 kilometres from the border. Each sentinel herd consisted of 10 large ear-tagged ruminants. The sentinel animals were tested every 30 days for the presence of BTV antibodies. Competitive enzyme-linked immunosorbent assays (cELISAs) were used to determine the antibodies against the common group antigen. Fourteen Onderstepoort black light traps were set up for *Culicoides* surveillance and monitoring in southern and western border districts of the country after April 1, 2009. Catches of *Culicoides* were sorted by traditional identification keys. The risk of BTV invasion was

assessed according to the World Organisation for Animal Health standards. The hazard identification, possibility of BT outbreaks, and assessment of the epidemiological situation in neighbouring countries were made based on other authors' reports on the density of small and large ruminants, and economical and trade relations between countries. In addition, the BTV situation on a Greek Aegean Sea Island was closely monitored in 2008-09.

During the 2009 serum surveillance period, 3340 serum samples from different species of ruminants were investigated, all with negative results for BTV antibodies; *C. imicola* was never detected in more than 12 years of *Culicoides* surveillance in Bulgaria. Analysis of 274 midges caught during 2009 showed that dominating *Culicoides* species were of the *Obsoletus* and *Pulicaris* complexes, well-known Palaearctic midges in Europe. The negative results from the Surveillance Programme supported the evidence of absence of active BTV circulation on the whole territory of Bulgaria during 2009. During the 2008-09 season, Greek Authorities reported several circulating BTV serotypes (1, 8, 16) on Lesbos Island. As the epidemiological situation on Greek islands in the Aegean Sea is complicated and not very clear, the risk of BTV entering Bulgaria ranges from high (in spring and summer) to moderate (in winter and autumn).

KEYWORDS: BLUETONGUE – DISEASE SURVEILLANCE – RISK ASSESSMENT – BULGARIA.

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