

## **Livestock farms in Belgium shelter they the mosquitoes (Diptera, Culicidae) potentially vectors of arboviruses?**

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Although no major arbovirus which mosquitoes are responsible for its transmission has been recorded in Belgium in recent decades, environment and climate change, current and future, could favor the emergence of vector-borne diseases in the country, by inducing changes on Culicidae populations. This study aims to determine the potential importance of agricultural environments, and especially livestock farms, to welcome and favor the proliferation of certain species of mosquito responsible for transmission of arboviruses. A taxonomic inventory was conducted in 2008 (III, VI and X) and 2009 (V and IX) in ten cattle farms, and in 2010 (X) in ten stables located in Belgium. The harvest of mosquitoes is based on larval sampling at the level of 14 biotopes such as water troughs, used tires, abandoned utensils and temporary puddles or not. The morphotaxonomic study of larvae and genitalia has allowed to identify eight species in 18 study stations. These are *Anopheles claviger* Meigen, 1804 ; *A. maculipennis* s.l. Meigen, 1818 ; *Culiseta annulata* Schrank, 1776 ; *Cs. morsitans* Theobald, 1901 ; *Culex modestus* Ficalbi, 1889 ; *Cx. torrentium* Martini, 1925 ; *Cx. territans* Walker, 1856 and *Cx. pipiens* s.l. L., 1758. Of the 1843 individuals examined in 2009, *Cx. pipiens* s.l. represents 79.98% of the total harvest; however, *Cx. modestus* represents only 0.92%. Used tires form the most favorable habitat for larval development of Culicidae. Therefore, despite the low diversity of mosquito observed within the livestock environments, they represent a significant risk for the reproduction of some potential vectors of arboviruses. In addition, some larval habitats constitute very favorable sites for proliferation of mosquito, causing a real problem of nuisance for animals of farms.

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