Advice 05-2016 of the Scientific Committee of the FASFC on the re-emergence of bovine brucellosis in Belgium between 2010 and 2013

After a long period without outbreak of brucellosis, during which Belgium was declared officially free of bovine brucellosis (Decision 2003/467/EC), some new outbreaks of bovine brucellosis due to *Brucella abortus* biovar 3, and an outbreak due to *Brucella suis* biovar 2, were identified between 2010 and 2013.

The Scientific Committee has evaluated the following aspects related to bovine brucellosis in Belgium: the origin of these new outbreaks, the effectiveness of the surveillance program, the methods of diagnosis, the prevention and control measures, the declaration of abortions and the legislation.

The epidemiological surveys conducted following these outbreaks allowed to analyse some assumptions concerning the origin of the *Brucella abortus* biovar 3 outbreaks. Nevertheless, it was not possible to definitely identify the origin of these outbreaks. It was established that all the outbreaks of *Brucella abortus* between 2010 and 2013 had the same molecular profile of *Brucella abortus* biovar 3. This molecular profile was also the same as the profile of the strains circulating in Belgium in 1980-1990. Infection of cattle with *Brucella suis* biovar 2 could be linked to a contact with intestines of wild boar. Epidemiological investigations have issued several recommendations.

Regarding prevention, the Scientific Committee stresses the importance of the application of strict quarantine and biosecurity measures by the introduction of new cattle in a farm, including the isolation of animals until the reception of the final results of the tests at purchase.

Regarding the surveillance and the diagnosis of bovine brucellosis, the Scientific Committee recommends to evaluate the added value and the modalities of an ELISA test on tank milk by a modeling study. If this study successful, the Committee recommends to consider the possibility to reintroduce the ELISA on tank milk as early detection test of possible new cases of brucellosis.

The primary outbreaks of bovine brucellosis were detected thanks to the analyses foreseen in the abortion protocol. This demonstrates the effectiveness and added value of this abortion protocol. Although the number of reporting and analysis of abortions have improved the last years, there is still room for improvement. Ways to increase the attractivity of the abortion protocol and the reporting of abortions are proposed. It is recommended to actively identify the farms that do not report abortions to sensitize and survey them. The Scientific Committee draws attention to the fact that fertility problems, such as heat returns, low gestation indices, elongated intervals between calvings, infertility of bulls, may be signs of brucellosis.

An updating of the Belgian legislation in regard to brucellosis is recommended to include new elements dealing essentially with: the diagnosis possibilities, the other susceptible species, a definition of abortion including calves born alive but succumbing within 48 hours after birth, the epidemiological investigations, the biosecurity.

The full text is available on this website in dutch and in french.