

Advice 23-2009 of the Scientific Committee of the FASFC on the risk assessment of *Trichinella* in Belgium.

As part of a request from Belgium to be officially recognised by the European Commission as a region where the risk of *Trichinella* in domestic swine is negligible, the Scientific Committee is asked to perform an epidemiological study of the Belgian *Trichinella* situation and to propose a risk-based determination of the number of domestic swine (slaughter pigs raised under controlled housing conditions and pigs at risk; this latter category comprises outdoor-reared pigs and breeding pigs) and indicator animals (foxes) to be tested annually in the case the recognition is attributed, in accordance with Regulation (EC) No 2075/2005.

Based on official data obtained with the digestion method, the real prevalence of *Trichinella* in domestic swine in Belgium is estimated at 0% (IC 95% : 0% - 0%, n = 136.311.723, exact binomial distribution) for the period from 1992 to 2008. This is less than one case per million pigs, which constitutes a negligible risk. The prevalence in horses is estimated at 0% (IC 95% : 0% - 0,0014%; n = 208.717) for the period from 1993 to 2008. The prevalence in wild boars is estimated at 0,0025% (IC 95% : 0,0003% - 0,0089% ; n = 81.042) for the period from 2001 to 2008. The prevalence in foxes is estimated at 0,2% (IC 95% : 0,0051% - 1,11% ; n=499) for the period from 2003 to 2009. In other domestic and/or wild animal species, the prevalence is zero. In man, the last case of trichinellosis caused by consumption of pork dated from 1893, and the last case caused by consumption of wild boar meat dated from 1978.

The sensitivity of the current surveillance system is higher than 99%, and the results of the ring tests do not lower this sensitivity under these 99%.

The Scientific Committee has quantitatively determined the risk level of *Trichinella* in domestic swine in Belgium, with two methods. The methodology described by Alban et al. (2008) has been used to compare the situation in Belgium and in Denmark, which obtained in 2007 the official recognition status as region with negligible risk of *Trichinella*. Based on this method, it was determined that the probability that the Belgian domestic swine population is free of *Trichinella*, based on the current surveillance program (testing all the pigs from all the categories), amounted to 98,91% (IC 95% : (98,69% – 99,1%). This can be considered as a negligible risk. Based on the risk-based surveillance program (testing only the swine population at risk, the probability amounted to 97,50% (97,13% - 97,82), what can also be considered as a negligible risk. However, the Scientific Committee makes comments on the methodology described by Alban et al. (2008) and proposes an alternative method based on scenario analyses. Based on this method, the probability that Belgium is currently free of *Trichinella* is 98,5%, which can also be considered as a negligible risk.

This indicates that an alleviated surveillance program aimed at the pig categories at risk can be proposed. The Scientific Committee recommends to continue to systematically test all domestic swine at risk (337.973 pigs, in accordance to estimations of 2008), all wild boars (cfr. wild fauna and cases in 2004 and 2007) and all horses (cfr. import risk), which is statutory laid down for the latter species. The scenarioanalysis method allows to evaluate the probability of detection of an eventual introduction of *Trichinella* in the population in function of different testing options of the slaughter pigs raised under controlled housing conditions. These options inform the risk managers on the choices to be made for the monitoring of this risk.

Concerning the wild fauna, the Committee recommends to test annually 2.922 foxes, also rats captured during other monitoring programs, and approximately fifty samples from other wild carnivores.

The Scientific Committee underlines also the importance of the strict respect of the biosecurity measures, notably concerning the feeding of pigs, and concerning the measures aimed at avoiding introduction of the parasite in pig farms from outside and from the wild fauna.

The full text is available on this website in dutch and in french, respectively under the section "Wetenschappelijk Comité/Adviezen" and "Comité scientifique/Avis".