

**Report of the  
Task Force on Zoonoses Data Collection  
on the Analysis of the baseline survey on the prevalence of  
*Salmonella* in turkey flocks, in the EU, 2006-2007<sup>1</sup>**

**Part A: *Salmonella* prevalence estimates**

(Question N° EFSA-Q-2006-041A)

**Adopted by  
The Task Force on 28 April 2008**

**Summary**

*Salmonella* is an important cause of food-borne illnesses in humans. Farm animals and food of animal origin form an important source of human *Salmonella* infections. Therefore, in order to reduce the incidence of human salmonellosis in the European Union, the Community legislation foresees setting of *Salmonella* reduction targets for food-animal populations including turkey flocks. To underpin such a target, a European Union-wide baseline survey was carried out to determine the prevalence of *Salmonella* in commercial turkey holdings with at least 250 birds for breeding turkeys and with at least 500 birds for fattening turkeys. The survey was the third of several baseline surveys to be conducted in the Community.

The sampling of turkey flocks took place between October 2006 and September 2007. Five environmental faeces samples were taken from breeding turkey flocks within nine weeks of slaughter and from fattening turkey flocks within three weeks of slaughter. A total of 539 breeding turkey flocks and 3,769 fattening turkey flocks with validated results, from the EU and Norway, were included in the survey analyses.

In each Member State, the number of reported holdings was combined with the number of birds annually reared in each holding (as evaluated from this survey) to estimate turkey population size. The geographical distribution of breeding turkeys in the European Union was highly heterogeneous. In fact, France accounted for 56.0% of the breeding population, followed by Italy (11.9%) and The United Kingdom (10.1%). None of the remaining Member States reached 5% of the total breeding population. The distribution of fattening turkeys was less heterogeneous. Still,

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five Member States accounted for 79.3% of the fattening bird population, namely, France (18.7%), Germany (16.4%), Italy (16.0%), Spain (14.7%), and Poland (13.5%).

Six of the 14 Member States isolated *Salmonella* spp. in their breeding flocks, which resulted in a Community observed prevalence of *Salmonella*-positive breeding flocks of 13.6%. This means that in the European Union around one in seven breeding turkey flocks raised over the one year period of the baseline survey was *Salmonella*-positive. The *Salmonella* prevalence in these flocks varied widely amongst the Member States, from 0% to 82.9%. Three of those six Member States isolated *Salmonella* Enteritidis and/or *Salmonella* Typhimurium, the two most common serovars found in *Salmonella* infection cases in humans. This resulted in an estimated Community observed prevalence of 1.7% for these two serovars, varying from 0% to 8.3% within the Member States.

The Community observed prevalence of *Salmonella*-positive fattening flocks was 30.7%, meaning that approximately one in three fattening turkey flocks raised over the one year period of the baseline survey were *Salmonella*-positive. The *Salmonella* prevalence in these flocks also varied widely amongst the Member States, from 0% to 78.5%. Thirteen of the 22 Member States with fattening turkey flocks reported to have isolated *S. Enteritidis* and/or *S. Typhimurium* resulting in a Community observed prevalence of 3.8% in the fattening turkey flocks. The Member State-specific observed flock prevalence of *S. Enteritidis* and/or *S. Typhimurium* varied from 0% to 18.4% in fattening turkeys.

In breeding flocks no single *Salmonella* serovar was isolated in more than three of the 14 reporting Member States. The five most frequently isolated *Salmonella* serovars from fattening turkey flocks in the European Union, in decreasing order, were: *S. Bredeney*, *S. Hadar*, *S. Derby*, *S. Saintpaul* and *S. Kottbus*. Out of these, only *S. Hadar* and *S. Derby* are frequent causes of *Salmonella* infections in humans within the European Union. The serovar distribution varied amongst the Member States, with serovars tending towards specific distribution patterns of their own.

The number of positive samples in a *Salmonella* positive breeding or fattening flock ranged between one and five. Almost all Member States had a major part of their *Salmonella*-infected flocks of fattening turkeys with all five samples positive. Reducing the number of samples taken per flock would have led to a substantially lower prevalence estimate of *S. Enteritidis* and/or *S. Typhimurium* in fattening turkey flocks.

*Salmonella* positive turkey flocks contribute to a consequent contamination of turkey meat. The risk for human health arises from accidental under-cooking of the meat or cross-contamination to other foods. Thorough cooking and strict kitchen hygiene will prevent or reduce the risk posed by *Salmonella* contaminated turkey meat.

While Community reduction target will most likely be set for a transitional period only for *S. Enteritidis* and *S. Typhimurium*, Member States may wish to consider addressing in their national *Salmonella* control programmes also other serovars when these serovars are of public health importance in their country.