EFSA Panel on Biological Hazards (BIOHAZ); Scientific Opinion on an estimation of the public health impact of setting a new target for the reduction of Salmonella in turkeys - DTU Orbit (03/01/2019)

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The quantitative contribution of turkeys and other major animal-food sources to the burden of human salmonellosis in the European Union was estimated. A 'Turkey Target Salmonella Attribution Model' (TT-SAM) based on the microbial-subtyping approach was used. TT-SAM includes data from 25 EU Member States, four animal-food sources of Salmonella and 23 Salmonella serovars. The model employs 2010 EU statutory monitoring data on Salmonella in animal populations (EU baseline survey data for pigs), data on reported cases of human salmonellosis and food availability data. It estimates that 2.6 %, 10.6 %, 17.0 % and 56.8 % of the human salmonellosis cases are attributable to turkeys, broilers, laying hens (eggs) and pigs, respectively. The top-6 serovars of fattening turkeys that contribute most to human cases are S. Enteritidis, S. Kentucky, S. Typhimurium, S. Newport, S. Virchow and S. Saintpaul. Comparing the prevalence of Salmonella in turkey flocks reported in 2010 with a theoretical combined prevalence for S. Enteritidis and S. Typhimurium of 1 % (i.e. the transitional target), a reduction of 0.4 % in the percentage of turkey-associated human salmonellosis cases would be achieved. However, when adjusting the combined prevalence of all serovars to 1 %, an 83.2 % reduction in the percentage of turkey-associated human salmonellosis cases, equivalent to 2.2 % of all human salmonellosis cases, is expected. Uncertainty and data limitations are discussed, including recommendations on how these could be overcome. Vertical transmission of Salmonella as well as hatchery acquired Salmonella contamination originating from breeding stock are very important sources for Salmonella infection in turkeys, and therefore controlling Salmonella in breeding flocks as well as in rearing and fattening flocks is necessary to minimise Salmonella in turkeys at slaughter.

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