SUMMARY

An EU-wide Salmonella baseline study was conducted on commercial large-scale laying hen holdings with at least 1,000 laying hens in the flock. The study was carried out in all the Member States, and the sampling of the holdings took place during the period of 1 October 2004 to 30 September 2005. Norway participated in the study on a voluntary basis.

The aim of the study was to estimate the Salmonella holding observed prevalence at the global EU-level as well as for each Member State specifically. In total, 5,317 laying hen holdings in the EU were included in this study. But a clean dataset comprising 4,797 holdings was mainly used to analyse the results. Samples were taken from flocks of laying hens during the last nine weeks of their production. One flock per each holding was sampled by taking five faeces samples and two dust samples.

The results show that at the global EU-level 20.3% of the large-scale laying hen holdings are bacteriologically positive for Salmonella Enteritidis and/or Salmonella Typhimurium. The Member States’-specific Salmonella Enteritidis – Salmonella Typhimurium holding observed prevalence estimates varied largely, from a minimum of 0% to a maximum of 62.5%.

The holding observed prevalence for any Salmonella subspecies was, in general, higher. At the global EU-level the presence of any Salmonella spp. was detected in 30.7% of the large-scale laying hen holdings. The range of the Member States’-specific Salmonella spp. holding observed prevalence was also wide, from a minimum of 0% to a maximum of 79.5%.

The number of positive samples in a holding varied between 1 and 7, and an important proportion of the holdings was found positive on the basis of only one or two positive samples.

Based on preliminary univariate analysis, holdings having Salmonella Enteritidis vaccinated flocks were less likely to be positive for Salmonella Enteritidis, in eight countries where both flocks vaccinated and unvaccinated against Salmonella Enteritidis were sampled. But with the subgroup of Salmonella Enteritidis positive holdings in these countries, there was no difference in the proportion Salmonella Enteritidis positive samples between vaccinated and unvaccinated flocks. Covered by the clean dataset, dust samples were found more positive for Salmonella Enteritidis.
and/or *Salmonella* Typhimurium than faeces samples. Medication with antibiotics within two weeks prior the sampling did not seem to have an impact on the results for *Salmonella* Enteritidis and/or *Salmonella* Typhimurium.

The five most frequently isolated *Salmonella* serovars in the EU were, in descending order: *Salmonella* Enteritidis, *Salmonella* Infantis, *Salmonella* Typhimurium, *Salmonella* Mbandaka and *Salmonella* Livingstone.