Bacterial contamination of table eggs and the influence of housing systems

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Abstract

With the introduction of alternative housing systems for laying hens in the EU, recently more research focussed on the bacterial contamination of table eggs. Contamination of eggshells with aerobic bacteria is generally higher for nest eggs from non-cage systems compared to nest eggs from furnished cages or from conventional cages. Studies indicate limited or no systematic differences in eggshell contamination with aerobic bacteria between eggs laid in the nest boxes of furnished cages and eggs laid in conventional cages. The major differences found in experimental studies between cage- and non-cage systems are less pronounced under commercial conditions. The effect of housing system on eggshell contamination with specific groups of bacteria is variable. Limited information is available on the influence of housing system on egg content contamination. Recent research does not indicate large differences in egg content contamination between eggs from cage- and non-cage systems (ignoring outside nest and floor eggs). Much of the research on eggshell and egg content contamination focuses on Salmonella. Observed Salmonella prevalence on the eggshell and in the egg content vary, depending on the fact whether investigations were based on randomly sampled table eggs or on eggs from naturally infected hens.