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[Occurrence of salmonellae in laying hens in different housing systems and inferences for control]

[Article in German]

[Methner U](#), [Diller R](#), [Reiche R](#), [Böhland K](#).

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As eggs represent now as ever the most important source for Salmonella infection in human beings and because of the currently occurring shift in housing conditions for laying hens from conventional cages to alternative systems it was studied whether the Salmonella prevalence in layers is influenced by the housing system. Following systems were considered: organic farming with free range management systems, floor management systems with free range, floor management systems without free range, conventional cages. 453 pooled faecal samples as single or double examination per herd from 329 flocks in different housing systems for table egg production from three Federal Lander were examined bacteriologically. The share of layer flocks which were Salmonella positive at least once independently of the housing system amounted to 32.2%. Analysis of the Salmonella findings in the single housing systems revealed that the share of Salmonella positive flocks was higher in conventional cage systems (46.3%) than in alternative housing systems (32.996% in organic farming with free range management systems, 21.9% in floor management systems with free range, 23.4% in floor management systems without free range).The results of the study clearly show that Salmonella Enteritidis (mostly phage type 4, other phage types rarely) presents with a share of 78% the dominant serovar in laying hens.The total number of all other serovars (apart from Salmonella Enteritidis and subspecies I rough) reached a share of ca. 14%, however, no other single serovar was dominant. As Salmonella Enteritidis is the predominant serovar in laying hens it is strongly recommended to use Salmonella Enteritidis vaccines for immunisation programmes of chickens during the rearing period. Because of the high prevalence of Salmonella organisms in the different housing systems, detailed information on the epidemiology of Salmonella in laying hens are needed to introduce effective control measures. Of particular interest is the question whether the Salmonella findings in laying flocks are the result of multiplication of already existing Salmonella organisms in the animals or whether the bacteria are introduced only during the laying period.

PMID: 17172134 [PubMed - indexed for MEDLINE]

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