

## **Effects of human-animal contact with layer pullets on fearfulness and technical results in the rearing and laying periods**

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Experiences on commercial farms indicate that human-animal relations can have an influence on technical results: a more docile flock usually has better performance than a more flighty flock. Whether a flock is flighty or docile is, to a certain extent, genetically determined. It also partly depends on the rearing period. Birds that are already flighty in the rearing period are usually more likely to give problems with fearfulness in the laying period. However, these are experiences on commercial farms that have not yet been validated by scientific research. As part of the Welfare Quality project a study has been conducted on 12 commercial rearing flocks. Three treatments were applied on 5 days when the pullets were around 10 days of age and on 5 days when they were around 16 weeks of age. The treatments comprised exposure to a person that: 1. walked at one pace through the house without talking; 2. walked slowly while talking to the birds; 3. walked slowly, squatted down and gave feed to the birds. To assess the effect of these treatments in the rearing period 3 tests were used to assess the fearfulness of the birds. These tests were: Stationary Person Test (reaction to a non-moving person), Novel Object Test (reaction to an unknown object), Touch Test (reaction to a person squatting in the litter). In the laying period 5 tests were used to assess fearfulness at 20 and 40 weeks of age. As well as the 3 tests that were carried out in the rearing period, 2 additional tests were done: Moving Person Test (reaction to a moving person) and Avoidance Distance Test (reaction to an approaching person). All tests were validated by Graml et al's. (2008) method. The technical results of pullets and laying hens are analysed using analysis of variance. The data from the fear tests were analysed with logistic regression analysis. The results showed that all flocks were very fearful. TT and NOT even gave numbers too low to enable statistical analysis. In the SPT, during 2 minutes, only 1 or 2 hens or often no hens could be recorded in the defined square (1 x 0.8 m) in front of the person. The 3 treatments only had minor effects on fear levels, which did not last very long. Some of the rearing flocks happened to have been in contact with humans more often due to some construction work that needed to be done in these houses. Those flocks were very docile in the rearing period, had the same average body weight as the controls (extra work group: 1358 g., controls: 1362 g.), but a slightly lower uniformity (+/-10%) (extra work group: 77%, controls: 84%;  $p < 0.05$ ). No differences in technical results were found the laying period. Further research is needed to investigate whether treatments in other periods during rearing or longer treatments could influence fearfulness more and could then have a lasting effect in the laying period.

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