

## Applied research as interplay between farm and group level: What attracts laying hens to the hen run?

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On farm research is well established in organic farming. The holistic approach considers the complexity of a farm and the findings will be implemented immediately. As the experiments are often performed on single farms the results are difficult to transfer to others. Controlled experiments on group level with representative samples investigate single factors and lead to reliable and well-founded results. However, they are often far away from implementation. Applied research requires interplay of on farm research and controlled experiments. A series of ethological research work should show how this interplay may take place.

Organic farming of laying hens requires daily use of hen run for welfare reasons. The outdoor area enables a more natural behaviour. But often only a part of the hens are outside and most of them close to the poultry house. What attracts them and how can the use of the hen run be improved? An overview on 12 single farms investigated first the situation and showed that structures seemed to have an influence. This effect was then tested on one farm with a single structure and a control without any structures (8 replicates). We found, that not significantly more hens were on the hen run with structure (22.5%) compared to the hen run without structure (21.5%), but they were better distributed to all parts of the run. Two choice experiments in 8 small groups one for amount and one for variation of structures have shown that amount (5% of run covered with structures compared to 1%) is more important than variation (5 different structures compared to 5 simple shelters). Finally the results of these experiments were implemented on eight farms and the effect was successfully tested with control groups on the same farms. With this stepwise procedure the use of hen run could be improved.