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# Furnished cages for layer management in small groups

## The test house of the Wesselkamp Farm

*In March 2002, a pilot project was launched in Germany, which initiated a number of field trials to test layer management in small groups. Within the framework of this project, three different models of „furnished cages“ for small-group layer management were tested in a poultry house of the Wesselkamp Farm in Lower Saxony, Germany. This article focuses on the characteristics of this special type of layer management as well as on the production results of the first laying period. Moreover, it describes the technical changes for the current second laying period. Furnished cages for small-group layer management are currently used in six European countries.*

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### Keywords

Layer management in the EU, furnished cages, layer management in small groups, test results

Fig. 1: Completely furnished Eurovent 625+a EU for small-group management for 60 layers



As of 1. January 2003, in compliance with the new EU directive 1999/74/EC, any new poultry house for layer management in the European Union is to be equipped with the aptly-named „furnished cages“. Contrary to conventional cage management systems with four to six birds per cage, laying hens are then to be kept in small groups of ten to 60 animals. The corresponding group cages are much larger than customary cage batteries. They are equipped with a laying nest, perches, claw shorteners as well as a litter bath and a mat insert for dust bathing respectively to enable the animals to pursue their natural habits.

In the beginning of 2000, the German poultry industry created a pilot program to study small-group management using furnished cages. This program was partly financed by the German Federal Government. Six pilot installations throughout Germany were equipped with furnished cages in order to test these poultry management systems in practice. This project is coordinated by the German Federal Research Centre of Agriculture (FAL) and the Veterinary University of Hanover evaluates the research results. In 2005, the yielded results will be taken into consideration in the European Commission's decision-making process concerning layer management. In Germany, it was initially intended to take also the scientific findings of this project into consideration prior to any further decision making. Contrary to this, the German Government has already deci-

ded, effective in 2007, to forbid not only conventional cage management systems, but also this newly-developed management system for small groups of layers. In other European countries, however, the original EU directive will still take effect so that furnished cages will be used there in the future.

### The Test House of the Wesselkamp Farm

The test house of the Wesselkamp Farm in Lower Saxony is of special interest in this pilot project: in 2001, three different systems were installed under identical conditions (house, climate, layer breed). The test house with a capacity of 8,000 laying hens belongs to the Deutsche Frühstücksei GmbH and has been equipped with installations from the Big Dutchman International GmbH located in Vechta-Calveslage (Lower Saxony, Germany). The installed systems are Eurovent 500A-EU, Eurovent 625A-EU and Aviplus, a furnished cage system which has been in use in Sweden for many years.

All three installations have been stocked with brown and white layers in order to examine whether certain systems are especially favorable for certain breeds. Different types of claw shorteners, nest inserts and litter baths have been installed. During the first laying period, groups of different sizes (8, 10, 16, 20 birds) were examined. All in all, 24 different variations were tested at this location.

## Results of the first laying period 2001/2002

In May 2001, the animals were moved in and in June 2002 they were moved out. The survey comprises a period of 52 weeks (363 days), during which the farm staff recorded data daily.

### Laying performance

In all three systems, the laying performance per hen housed at the beginning of the laying period was very high and amounted to an average of 310.9 eggs (individual results between 297 and 324 eggs).

### Mortality

During the test period, the losses of animals amounted to 7.5% in the Eurovent 500 installation, while mortality in the Eurovent 625 and Aviplus installations was at a surprisingly low level of 0.5% per month.

### Amount of cracked eggs (cracks and leakers)

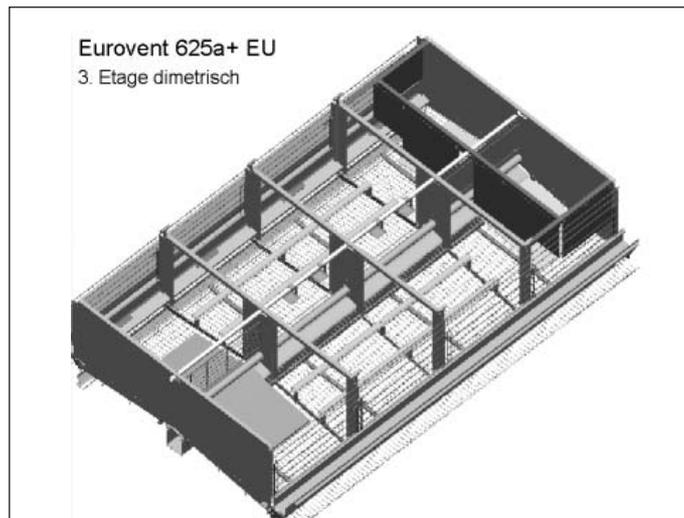
The amount of cracked eggs is an important indicator for the system's quality. These values reflect whether the arrangement of the different cage elements and the roll-out paths respectively are well adjusted to each other and whether a high egg quality can be achieved. During the first two weeks after the onset of laying the share of cracked eggs amounted to 1.5 to 2.3% and then gradually decreased in the course of the laying period until week 45. The animals' acceptance of the nest and nest inserts can thus be considered optimal. With respect to the entire laying period, the amount of cracked eggs averaged only 0.6%.

### Share of dirty eggs

In the course of the laying period, the share of dirty eggs slightly increased and averaged 2.3%. This is very good performance.

In order to obtain scientifically reliable test results, data from several laying peri-

Fig. 3: The new Eurovent 625+a; diametric view of a variant for 40 layers



ods have to be collected so that it is not until 2005 that the institutes involved in this trial will present their final results concerning workplace quality, product quality, environmental effects and animal health. Last June, however, initial results were published, which confirm that layer management in small groups has proved successful in practice.

### Current laying period 2002/2003

On the basis of the experiences made during the first 12 months, some technical details of the Wesselkamp test house have been changed after the first laying period. For the second laying period a new system with cages for 40 to 60 layers, the Eurovent 625+a, has been installed. Each cage has a width of either 2.40 or 3.60 m and a depth of 1.25 m. Since the cages are very spacious, their equipment can be arranged in such a way that each layer has much more freedom to move.

International experts are still discussing whether units with a maximum of 20 hens really constitute the optimum solution for layer management and whether units with 40 and more birds will inevitably lead to beha-

viour-related problems. It is for the first time ever that four groups of different sizes have been housed under identical conditions in the Wesselkamp test house. It is thus of great interest, which group size will yield the best results with respect to animal behaviour, animal health and productivity. Currently the initial results of the other test models indicate similar high production levels.

Furnished cages have proved successful in practice. The different models installed in the Wesselkamp test house yielded good and very good results respectively.

Nevertheless, in the course of the revision of layer management regulations, the German Government has decided to forbid furnished cages. The evaluations of the comprehensive data of this project, however, have completely been ignored during the decision-making process of the BMVEL (Ministry of Consumer Protection, Nutrition and Agriculture).

Egg producers in other European countries, however, are still highly interested in the Wesselkamp project, since our European neighbors intend to take the acquired data into consideration prior to any further decision concerning future investments.

Big Dutchman will remain in charge of this project and will spare no effort in supporting it also beyond the year 2003, since the test house will probably be run until 2012. The technical designers and product engineers of the world market leader for housing equipment will take any remaining opportunity to continuously test furnished cages in practice, to perfect them and to test the technical details.

Many influential people from virtually all European countries visit the Wesselkamp Project in order to inform themselves about the state of the art. The results from this test will help to establish accurate opinions, which should be the basis for future regulations.

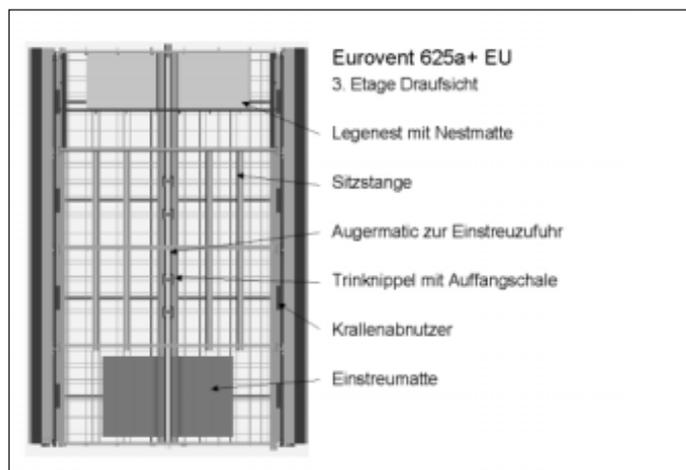


Fig. 2: The new Eurovent 625+a has been installed for 40 and 60 hens; top view of a variant for 40 layers