

RESEARCH ABOUT THE WAY OF ACTION OF THE ALTERNATIVE SYSTEMS FOR MAINTENING THE LAYING HENS, ON THE DYNAMIC OF WEIGHT GROWING, OF EGG PRODUCTION AND LAYING INTENSITY.

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Abstract

Exploiting hens in alternative growing systems, influences the body development, the egg production and the intensity of laying. Blending them exploiting in a certain maintaining system which the production demands asks for a long scientific research.

Key words: laying hens, alternative systems, laying intensity

INTRODUCTION

Although in the sphere of production of consumption eggs are an rich experience, filled with the results of numerous scientific research, remained quite a few aspects whose solution remains for the future.

According to EU Directive regulating comfort to be assured of laying hens, conventional cages will change by 2012, after which they will necessarily be replaced with improved cage or switching to alternative growing systems.

MATERIAL AND METHODS

Laying hens used in the experiments belonged Lohmann Brown hybrid is a hybrid very early, reaching an intensity of 40% lay at 20 weeks; tip laying is installed at 28 weeks and is 93%.

Hens were divided into 4 groups including a control group (Lc) and three experimental groups (L1exp-L3exp)

Maintenance systems

Control group (Lc) was maintained in intensive system on permanent litter. Experimental group 1 (L1 exp) was maintained in intensive technological beds located on the 2/3 of the compartment and third permanent litter. Experimental group 2 (L2 exp) was housed on permanent litter with sleeping perches centrally located. Experimental group 3 (L3 exp) was maintained in semiintensive system on permanent bedding and sleeping perches with paddock access.

RESULTS AND DISCUSSION

Table 1

The dynamic of weight gain.

Body weight is a factor that influences a rather considerable extent egg production number that will be obtained from a bird. It is demonstrated that the highest production of eggs obtained from birds whose weight is the average population they belong.

In the studied case although the body weight of birds was within the standard curve specific hybrid "Lohman Brown" found some difference between groups determined by the intensity of laying registered varied from batch to batch.

When stocking (age 19 weeks) the average weight of the hens for the four lots was almost equal, as of $1518 \pm 12,94$ g at the control group – Lc, of $1518,21 \pm 11,25$ g at the group L1 exp, of $1519,37 \pm 13,48$ at the group L2 exp and of $1519,02 \pm 9,40$ at the group L3 exp.

At the lay out the curve plateau (week 38-a) difference in body weight of birds studied widened varying between $1851,61 \pm 30,9$ g at the group L1 exp, and of $1857,16 \pm 29,73$ at the group L3 exp.

When the birds have reached the age of 81 weeks the recorded averaged body weight of $1949,99 \pm 46,70$ g at the group L1 exp, of $1958,89 \pm 47,22$ at the group L2 exp and of $1959,88 \pm 44,84$ at the group L3 exp.

In terms of character homogeneity in the study except during the start of laying, when variability was low, otherwise values were found specific for variability of a medium and even small variability.

Egg production and laying intensity.

Heritability coefficient for egg production is 0.56 and the variability of production when the peak of laying is 10.7 to 13.6%.

Until the age of 80 weeks, the "Lohman Brown" hybrid is capable to produce 337,5 eggs/hens, but in the conditions of an intensive-industrial type exploitations in cages by ensuring an optimized environment.

The obtained results have indicated a decrease of the production levels by 10,02-18,99% due the causes generated by the exploitations techniques in which the movements of the birds were much bigger than in the case of maintenance in battery cages, because the received food was not exploited at superior parametres in the egg production.

Of all technologies used to note the bed technology used in L1 exp that allowed the highest production of eggs 303.66 pieces/hen in an exploitation period of 61 weeks. The second position was taken by the L2 exp group with the increase on permanent litter and perches to rest with an average of 293.65 eggs/hen. At the control group Lc whit hens grown only

on permanent litter were obtained 283,48 eggs/hen and at the L3 exp group whit free access in the paddock were obtained a production of 273,40 eggs/hen.

Correlated with the number of egg production, recorded laying intensity values were under the standard curve of the layer hybrid that was worked on. So at 28 weeks laying intensity was only 78,11% at the control group Lc, of 83,95% at the L1 exp group, of 80,91% at the L2 exp group and of 75,33% at the L3 exp group, compared whit 93% that is the pick of laying of the "Lohman Brown" hybrid. This low laying intensity were maintained as until the end of laying week 80 where much lower than normal of 59%, being of 49, 56% at the control group Lc, of 53,10% at the L1 exp group, of 51.33% at the L2 exp group and of 46,78% at the L3 exp group.

CONCLUSIONS

In terms of weight evolution of birds studied in this experience that he enrolled on a theoretical weight curve, but to its lower limit. Causes of this effect was determiante by the discomfort factors offered by way of maintenance.

In the smaller number of eggs obtained during the operating period and implicitly the lower intensity of laying due to consumption of energy by motion. In group L3 exp on laying played an important role and influence the light on neuroendocrine system, the hens being free in the paddock and exposed to daylight.

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