Effect of some light manipulations on egg production performance of Fayoumi chickens

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Abstract:

The effect of light type and program on egg production and quality using two hundred and sixteen Fayoumi chickens was studied for 8 periods (28 days/period) during the laying period from 24 to 56 wks of age. Experimental birds were randomly divided into six experimental groups (each group was divided into three replicates/12 birds each). Group 1, the birds were exposed to continuous common light program (12L:12D/day) and was considered as a control; Group 2, the birds were exposed to intermittent common light program (6L:6D) each 12hrs of day; Group 3, the birds were exposed to biomittent common light program (30 minutes light: 30minutes dark/hour for 12hrs of day); Group 4, the birds were exposed to continuous flash light program (12L:12D/day); Group 5, the birds were exposed to intermittent flash light program (6L:6D) each 12hrs of day; Group 6, the birds were exposed to biomittent flash light program (30 minutes light: 30minutes dark/hour for 12hrs of day). Birds were reared under the same managerial, feeding and hygienic conditions throughout the experimental period. The results showed that there were not significant differences in body weight change between the light type, program and their interaction. Intermittent and biomittent lighting program improved feed conversion ratio, while flash lighting program decreased significantly egg weight values. Birds exposed to continuous common light program had significantly higher egg production percentage than those in flash lighting treatment. However, no significant effect on average of egg mass due to main effect of light type and program or the interaction between them. No significant effect due to light program on all egg quality traits. While, shell percentage and thickness (mm) for hens exposed to flash light had lower values than those in common light type. No significant effect on average of mortality rate due to main effect of light type and program or the interaction between them.

Keywords:

Fayoumi chickens, light type and program, laying performance

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