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a Comparative Study on the Performance of some White Leghorn Strains under Gezira State Condition, Sudan

Mohamed Ahmed[1], Hytham Abdelateef[2], Khadiga Elamin[3]

[1] *University of Alneelain, Animal Production, Sudan*
[2] *University of Gezira, Animal Production,*
[3] *University of Gezira, Animal Production,*

Abstract

Enough data on the general performance of exotic egg type strains under Sudan condition is lacking. The main objective of this study is to compare the differences of some white leghorn strains in term of performance during growing, pre laying and laying period under local conditions. The present experiment was carried out in summer season during the period of first of May 2013 till the end of June 2014. Birds were caged randomly in an open-sided poultry house at University of Gezira, Abu Haraz farm. One hundred sixty two one-day-old female layer chicks from three white leghorn strains (Hyline, Hisex and Lohman) were used. The chicks were fed pre starter pellets from one day old up to the second week of age. The birds were provided with similar three types of rations, grower from 3 to 15 weeks of age and then pre layer ration from 16–21 weeks, finally layer ration was fed till the end of experiment. A completely randomised design (CRD) was used. Collected data were analysed using GLM procedure in SAS. Means were separated using Duncan's Multiple Range Test. Weekly body weight, body weight changes, feed intake, feed efficiency, livability percentage, hen day egg production, hen housed egg production and egg mass were reported. During growing period, Hyline strain had significantly ($P \leq 0.05$) showed the lower feed intake and improved feed efficiency versus Hisex and Lohman. During growing, pre-laying and the whole period, Lohman recorded significantly ($P \leq 0.05$) higher average livability% compared to Hyline. Nevertheless Hisex showed no significant ($P \geq 0.05$) difference versus both Hyline and Lohman. During laying period, no significant ($P \geq 0.05$) differences were observed in growth performance parameters among different strains. Moreover, no significant ($P \geq 0.05$) differences in average hen day egg production%, hen housed egg production% and average egg mass (g/ hen/ week) across different strains. It could be concluded that Hyline strain is superior in feed efficiency during growing period and egg weight while Hisex and Lohman strains have higher livability.

Keywords: Egg production, layers, Performance, White Leghorn strains

Contact Address: Mohamed Ahmed, University of Alneelain, Animal Production, P.O. Box 12702, 11121 Khartoum, Sudan, e-mail: moha_555@hotmail.com