

The Effects of Neurospora crassa-Fermented Palm Kernel Cake in the Diet on the Production Performance and Egg-Yolk Quality of Arab Laying-Hens

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Abstract : An experiment had been conducted to determine the effects of several levels of Neurospora crassa-fermented palm kernel cake in the diet on the production performance and egg-yolk quality of Arab laying-hens, and to obtain the appropriate level of this fermented palm kernel cake for reducing the utilization of concentrated feed in the diet. Three hundred Arab laying-hens of 72 weeks old were employed in this experiment, and randomly assigned to four treatments (0, 7.25, 10.15, and 13.05% fermented palm kernel cake in diets) in a completely randomized design with five replicates. Measured variables were production performance (feed consumption, egg-mass production, feed conversion, egg weight and hen-day egg production), and egg-yolk quality (ether extract and cholesterol contents, and egg-yolk color index). Results of experiment indicated that feed consumption, egg-mass production, feed conversion, egg weight, hen-day egg production and egg-yolk color index were not influenced ($P>0.05$) by diets. However, the ether extract and cholesterol contents of egg-yolk were very significantly reduced ($P<0.01$) by diets. In conclusion, Neurospora crassa-fermented palm kernel cake could be included up to 13.05% to effectively replace 45% concentrated feed in Arab laying-hens diet without adverse effect on the production performance.

Keywords : neurospora crassa-fermented palm kernel cake, Arab laying-hens, production performance, ether extract, cholesterol, egg-yolk color index

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