شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم

HANAA ALY

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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HANAA ALY

EFFECT OF ULTRAVIOLET EXPOSURE ON PRODUCTIVE, REPRODUCTIVE, PHYSIOLOGICAL PERFORMANCE AND IMMUNE RESPONSE OF LAYING HENS

By

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B.Sc. Agric. Sc. (Animal Production), Fac. Agric., Zagazig University, 1999

M.Sc. Agric. Sc. (Animal Nutrition), Fac. Agric., Zagazig University, 2005

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ABSTRACT

The main objective of the current study was to elucidate the role of Ultraviolet (UVA) light with wavelength up to (368 nm) in improving the productive performance and physiological status of two developed strains of chickens. A total number of 165 birds (150 female + 15 male) from each of Silver Montazah and Matrouh strains were used in the study. The experimental period was from 20 to 40 weeks of age. All bids were weighed and randomly distributed into five treatments with three replicates per treatment (10 females and 1 male / replicate) with almost similar initial average body weight. During the experimental period, birds were fed ad libitum a commercial layer diet. Experimental groups were exposed to natural day light which is recommended in the farm, for lighting program as follows: The first group (control group) was exposed to normal day light only, while the second, third, fourth and fifth groups were exposed to 1, 2, 3 and 4 hours/day respectively to UV light from UV lamps after sunset. Birds reared up under similar condition.

Results indicated that live body weight (LBW), feed conversion ratio (FCR), egg production, egg mass, egg quality traits (external and internal), some blood components, immune responses to sheep red blood cells and litter microbial count were significantly improved ($P \leq 0.05$) by supplemental exposure of birds to UVA lamps for 2-3 hours daily.

It could be concluded that interaction between strains and artificial source of UVA light by UV lamps was (2-3 hours/day) for both silver Montazah and Matrouh developed local strain of chickens.

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Keywords: UVA, Ultraviolet lamps, Laying hens, light program, Productive performance and Litter microbial count.

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