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Effect of Plumage Colour on The Productive and Physiological Performance of Two Lines of Turkey During Egg Production

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Abstract: Using 32 hens from two turkey lines; broad-breasted bourbon red (BR), this study assessed how plumage colour affects physiological functions during (26-40) weeks of observation. A total of 16 hens from the BBB line and 16 hens from the BR line, were bred from 26 weeks of age. According to our results, BBB line significantly ($p \leq 0.05$) higher body weight at first egg production, feed intake, and feed conversion ratio during the study period. A significantly ($p \leq 0.05$) higher feed conversion ratio, a higher production rate of hen-day eggs, and a higher rate of egg production by the BR line. It is, however, noteworthy that the age at first egg production, egg weight, the egg mass, the yolk weight, the yolk percentage, the albumen weight percentage, the egg shell thickness, width, and length, the shank and yolk index were not significantly ($p \geq 0.05$) different between the two lines at 26 weeks of age. The levels of luteinizing hormone (LH) and follicle-stimulating hormone (FSH) were not significantly ($p \geq 0.05$) different between the two lines at 26 weeks of age when eggs were produced. Both turkey lines presented in this study potentially be raised in Iraq, as well as used as hens to produce high quality eggs for genetic improvement.

Keywords: Egg production performance, Egg quality traits, Turkey hens.

Introduction