Abstract

In order to Evaluation the relationship between the relative expressions of ghrelin and neuropeptide Y genes with levels of feed intake and growth rate, 60 one-day-old Ross 308 chicks were grown in standard conditions for 42 days. All chicks were grown individually in floor pens and were supplied feed and water ad libitum throughout the growing trial. Broiler chickens body weights and food consumption were individually measured weekly. At least 2 birds from each experimental group were slaughtered at 14, 28 and 42 days of age; and various internal organs including the liver, spleen, gizzard and etc were taken and measured on the aforesaid days of age. mRNA extraction from the sample tissues was performed using standard kits and the relative pattern of expression of ghrelin and neuropeptide Y genes was evaluated in target tissues. The result indicate the sex, age and their interaction had a significant effects on chicken body weight gain (P<0/05). Accordingly, result show the weight of the male chicks was higher than female weight at the end of growing period (P<0/05). The interaction effect of sex and ages of broilers on feed conversion ratio was not significant (P>0/05). In addition relative expression of the Ghrelin was not significantly different in the intestine of males and females broiler (P>0/05). Similarly, sex shows age-specific significant effects on the expression of brain neuropeptide Y gene, as brain NPY expression only have been found to be higher in male than female at the 28 days of age (P<0/05). Carcass yield, relative percentage of breasts and thighs also found to be higher in males than females (P<0/05). Overall of the result of this study indicate that the difference in levels of feed intake as well Growth performance of chicken broiler at different age may not be related to expression levels of neuropeptide Y and ghrelin genes in analyzed tissues.

Keywords: Gene Expression, Gender, Feed Intake, Ghrelin, Neuropeptide Y, Broiler.

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Evaluation the effects of sex on the expression pattern of ghrelin and neuropeptide Y genes in different breeding ages of Ross 308 broilers

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