

# Effects of feeding brown Tsaiya ducks diets with different protein and energy concentrations during growth period on laying performance <sup>(1)</sup>

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## Abstract

The this experiment was aimed to investigate the effect of feeding brown Tsaiya ducks diets with different protein and energy concentrations during growth period on laying performance. Ducks were fed with the same diets that nutrient concentration recommended in the manual of nutrient requirements of ducks during 0-3, 9-14 and 15-44 weeks of age. Ducks were allocated randomly in the floor rearing duck house at 3 weeks of age. In the growth period (4-8 weeks of age), experimental diets with different nutrient concentrations were fed with a factorial design with crude protein 13.5, 15.0, 16.5% and metabolizable energy 2,600, 2,800 kcal/kg, respectively. There were three replicates per treatment group, with 20 ducks per replicate, for a total of 6 treatment groups. Growth performance was determined at 3, 5 and 8 weeks of age, and laying performance was determined from 21 to 44 weeks of age. The results showed that: the average daily feed consumption from 4 to 8 weeks of age in each group was between 106-112 g, and there was no difference between the groups. The body weight of each group at 3, 5, and 8 weeks of age were 339-352, 727-759, 1,119-1,160 g, respectively, and there was no difference between the groups. At 21 to 44 weeks of age, the laying rate of the CP 15.0%, ME 2,800 kcal/kg group was 84.3% which indicated a better trend than other groups. The feed conversion ratio of each group from 21 to 44 weeks of age ranged from 3.22 to 3.47, and there was no significant difference between the groups; however, the value (3.22) of CP 15.0%, ME 2,800 kcal/kg group had a trend that better than other groups. Based on the above, if feed consumption, body weight, egg laying rate and feed efficiency are considered at the same time, it is recommended to feed ducks CP 15.0% and ME 2,800 kcal/kg diets in the growth period, which is sufficient to meet the laying requirement of brown Tsaiya ducks in the later laying period.

Key words: Brown Tsaiya duck, Growth period, Laying performance, Crude protein, Metabolizable energy.

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