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Effects of supplementing different ratios of purple napiergrass powder in the diet on mule duck's growth performance and carcass traits [1]

Jung-Hsin Lin [2] Jeng-Bin Lin [3] Tzu-Rung Li [3] I-Heng Chang [4] Chih-Hsiang Cheng [2] Chin-Hui Su [2] Hsiu-Chou Liu [2] and Ya-Ling Lin [2] [5]

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Abstract

The purpose of this experiment was to investigate the effects of supplementing different ratios of purple napiergrass powder in the diet on mule duck's growth performance and carcass traits. In this experiment 240 mule ducks from hatched to 3 weeks of age were raised in the brooding house. After 3 weeks of age, ducks were randomly allocated into control group (no purple napiergrass powder added), 2, 4 and 6% purple napiergrass powder added groups, totally 4 treatment groups, and 3 replicates in each group, 20 ducks half male and female per replicate. The diet fed from 3 to 10 weeks of age contained 15.4% crude protein and 2,890 kcal/kg of metabolizable energy. All treatments were isocaloric and isonitrogenous. The growth performance of ducks was determined at 3, 7 and 10 weeks of age. At 10 weeks of age, 3 male and 3 female ducks were randomly chosen in each treatment and were sacrificed for carcass traits determination. The experiment results showed that the body weight at 10 weeks of age of each treatment was in the range of 2,813 to 2,847 g. There was no significant difference between the treatments, through the body weight of the 6% purple napiergrass powder added group was 2,847 g, which had a trend of heavier than the other three groups. The average daily feed intake of ducks from 3 to 10 weeks of age in each treatment was in the range of 148-152 g, with no significant difference between the groups. The feed conversion ratio from 3 to 10 weeks of age in each treatment was in the range of 3.08 - 3.13, with no significant difference between the groups. The primary feather length at 10 weeks of age of each treatment was in the range of 15.9 to 17.0 cm, and ducks fed diets containing purple napiergrass powder had longer primary feathers than the control group ($P < 0.05$). The 445 g breast meat in the group supplemented with 6% purple napiergrass powder in the diet tended to be heavier than the other three groups. If body weight, feed conversion ratio, primary feather length and breast meat weight are considered simultaneously, it is recommended to add 6% purple napiergrass powder to the diet.

Key words: Carcass traits, Growth performance, Mule duck, Purple napiergrass.

(1) Contribution No. 2736 from Livestock Research Institute, Council of Agriculture, Executive Yuan.
(2) Ilan Branch, COA-LRI, Ilan 26846, Taiwan, R. O. C.
(3) Forage Crops Division, COA-LRI, Tainan 71246, Taiwan, R. O. C.
(4) Technical Service Division, COA-LRI, Tainan 71246, Taiwan, R. O. C.
(5) Corresponding author, E-mail: linyaling165@tlri.gov.tw.