

Effect of replacing dietary corn with pulverized rice on the growth performance and carcass traits in mule ducks⁽¹⁾

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Abstract

The purpose of this experiment was to determine the effects of feeding diets containing different ratio of pulverized rice on growth performance and carcass traits of mule ducks, and to establish the feeding standard. A total of two hundred and forty mule ducks were used in this experiment. Ducklings from hatched to 3 weeks of age were raised in the brooding house. After 3 weeks of age, ducks were raised in a duck house and allocated randomly into four treatments: control and three isocaloric and isonitrogenous groups in which graded level (50%, 75% or 100%) pulverized rice was in substitution for corn in control diet. There were three replicates in each treatment. Body weight, feather length, and feed consumption were collected at 3, 7, 10 and 12 weeks of age. Feed intake, body weight gain, feed conversion ratio were calculated in different periods. At 12 weeks of age, three ducks in each replicate were randomly selected and sacrificed to determine the carcass traits. The results showed that ducks consumed about 149 to 156 g per day from 3 to 12 weeks of age and no significant difference was found among treatments. Body weights of mule ducks were heavier in treatments containing higher ratio of pulverized rice ($P < 0.05$). Feed conversion ratio in all treatments were about 4.08 to 4.20 from 3 to 12 weeks of age and no significant difference was observed among treatments. Ducks in the group with 100% corn replaced by pulverized rice had heavier breast weight than those in control group ($P < 0.05$). Despite diets with higher ratio of pulverized rice did not affect the shear force of breast meat, the b value on breast skin in the treatments containing over 75% pulverized rice was significantly reduced ($P < 0.05$). The results showed that replacing corn with pulverized rice in diets could improve mule ducks' live weight, carcass weight and breast weight. Nevertheless, the color was fading on carcasses was observed.

Key words: Growth traits, Mule duck, Pulverized rice.

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