

# Evaluation of feeding diet with raised nutrient concentration on alleviating heat stress in mule ducks<sup>(1)</sup>

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Received: Oct. 1, 2015; Accepted: Mar. 22, 2016

## Abstract

The purpose of this experiment was to evaluate the effects of raised nutrient concentration diet on alleviating heat stress in mule ducks. There were three treatments in the experiment, optimal temperature with commercial diet treatment as control group, high ambient temperature with commercial diet and high ambient temperature with raised nutrient concentration diet respectively. Ducks were bred in an artificially controlled climate chamber. Determined traits were described as following: growth traits: body weight, feed intake, carcass weight, dressing percentage, abdominal fat weight and breast proximate chemical composition. The experiment lasted for six weeks. The results indicated that no significant difference was found on body weight between treatments. However, ducks bred in optimal temperature consumed most and high ambient temperature with raised nutrient concentration consumed less feed significantly ( $P < 0.05$ ), which resulted in better feed conversion ratio ( $P < 0.05$ ). In the carcass traits, optimal temperature with commercial diets group showed higher dressing percentage when ducks were sacrificed at 10 weeks of age ( $P < 0.05$ ), nevertheless, no significant differences were found on breast proximate chemical composition. In conclusion, to feed ducks raised nutrient concentration under heat environment could improve feed conversion ratio, but no significant influence was found on ducks' body weight.

Key words: Ambient temperature, Heat stress, Mule duck.

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