

Effects of dietary replacement of corn with Taichung Sen 17 Brown rice on growth performance and carcass characteristics of broilers ⁽¹⁾

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Received: Oct. 1, 2015; Accepted: Mar. 17, 2016

Abstract

This experiment was conducted to study the effects of dietary replacement of corn with brown rice on growth performance and carcass characteristics of broilers. A total of 390 day-old broilers were randomly assigned into five groups. A corn-soybean meal basal diet was offered in the control group and Taichung Sen 17 brown rice was used to replace 50%, 75% or 100% of the corn in diets for the other three groups. In the fifth group, 50 mg/kg of β -carotene was supplemented into the 100% replacing diet. Feed and water were offered ad libitum during the five weeks trial period. Eight chickens from each treatment were sacrificed for measuring the carcass characteristics. Results showed that replacing 50% to 100% of corn with brown rice in diets did not influence the feed intake, weight gain, feed conversion ratio and survival rate of the broilers. Carcass dressing percentage and abdominal fat percentage of broilers were also not affected. However, birds fed higher brown rice diet showed the lighter breast meat color ($P < 0.05$). Moreover, the entire brown rice had significantly lower the flavor score ($P < 0.05$). Supplementation of β -carotene in diet could not increase the breast meat color. Results indicated that the optimal replacement ratio of corn with brown rice in broiler diet was 50%, when the growth and carcass performances were considered at the same time.

Key words: Broiler, Taichung Sen 17 brown rice, Carcass characteristics, Growth performances.

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