

Effect of dietary replacement of corn with feed rice on the growth performance and carcass trait for red-feathered Taiwan country chickens⁽¹⁾

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Abstract

An experiment was carried out to compare the growth performances and dressing percentage, carcass parts and organs of red-feathered Taiwan native chicken by substituting the corn in ration with various levels of feed rice (Taichung-Sen No.17). Three hundred and sixty healthy red-feathered Taiwan native chickens at 0-day were used as experimental animals, with similar body weight, were selected and randomly assigned to 5 treatment groups, which were allocated into 4 repeats with 18 chickens in each pen. The treatments were as follows: 0% (control), 50%, 75% and 100% of rice instead of corn and 100% + 30 ppm xanthophyll group for 13 weeks experimental period. Feed and water were provided *ad libitum*. The results showed that the 100% of rice instead of corn group had a significantly ($P < 0.05$) lower feed intake and significantly ($P < 0.05$) better feed conversion ratio in starter period than that control group, but the grower, finisher and full period were not affected by the various levels of rice instead of corn. In addition, various levels of rice instead of corn had no effects on live body weight, daily gain weight and mortality, and percentage of dressing, head and neck, back, breast, wing, thigh, feet, abdominal fat, gizzard, heart, liver, spleen, intestine and testis. Furthermore, the plasma uric acid concentration in 13 weeks old of 100% of rice instead of corn group was significantly ($P < 0.05$) higher than those from the control group, and concentration of plasma total cholesterol was significantly ($P < 0.05$) lower than those from the control and 75% of rice instead of corn group ($P < 0.05$). However, live body weight, daily gain weight, feed intake, feed conversion ratio and mortality and plasma uric acid, total cholesterol, creatinine and triglyceride concentration, and percentage of head and neck, back, breast, wing, thigh, feet, abdominal fat, gizzard, liver, spleen, intestine and testis were not affected by the added 30 ppm xanthophyll. Also, the heart ratio in added 30 ppm xanthophyll group was significantly ($P < 0.05$) smaller whereas the added 30 ppm xanthophyll group had significantly ($P < 0.05$) greater percentage of dressing.

Key words: Red-feathered Taiwan country chicken, Feed rice, Growth performances, Carcass traits.

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