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Performance, Carcass, Meat and Fat Characteristics of Thai Native Chicken and Broiler

Sanchai Jaturasitha*, Varaporn Leangwunta*, Amnuay Leotaragul**, Ankana Phongphaew*, Therdchai Vearasilp*, Udo ter Meulen***

**Chiang Mai University, Department of Animal Science*

***Chiang Mai Livestock Research and Breeding Center, Sanpatong*

****Georg-August-University of Göttingen, Institute of Animal Physiology and Nutrition*

Abstract

A study of productive performance and carcass quality of Thai Native chicken (N) and Abor Acres broiler (B) was conducted using the completely random design (CRD), furthermore the meat and fat quality was designed in 2 x 2 factorial in CRD (2 breeds and 2 muscle; breast and thigh). The native chickens were fed ad libitum with commercial layer diet and the broiler a commercial broiler diet. All chickens were slaughtered at market size, the slaughtered weights of N and B were around 1.2 and 1.9 kg respectively. Carcass, meat and fat quality of the two different chicken breeds were investigated. The results showed that body weight at 0–6 weeks, average daily gain and feed intake at 0–2, 2–4 and 4–6 weeks of N were less than those of B ($p<0.01$). Furthermore, feed conversion ratio at 0–2 and 2–4 weeks of N were higher than B ($p<0.01$) but there was no significant difference at 4–6 weeks. The mortality rate of B was higher than N ($p<0.05$) at 0–2 and at 2–4 weeks however, at 4–6 weeks there was no significant difference. The feed cost per kg gain of N was higher than B ($p<0.01$). Among carcass characteristics the dressing percentage of N was less than B ($p<0.05$) in contrast, the percentages of retail cuts in terms of thigh and Pectoralis minor of N were higher compared to B ($p<0.05$) as well as wing ($p<0.01$) and drumstick ($p<0.05$). There was quite similar percentages of internal and external organ. The results of breeds and muscle types had affected on conductivity value and meat color ($p<0.01$). But no effect for pH value, nutritive value and water holding capacity ($p>0.05$) was found. The results of fat quality found that breeds and muscle types had affected on total saturated fatty acid, monounsaturated fatty acid, total unsaturated fatty acid and technological property in term of unsaturated to saturated fatty acids ratio ($p<0.01$).

Keywords: Carcass, fat, meat, native Thai chicken and broiler, performance