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A Comparative Study of Thai Native Chicken and Broiler on Productive Performance, Carcass and Meat Quality

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Abstract

A study of productive performance, carcass and meat quality of Thai Native chicken (N) and Abor Acres broiler (B) was conducted using a completely random design. The native chicken 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 and meat 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 of B ($p < 0.01$) but there was no significant difference at 4–6 weeks. The mortality rate of B was higher than of N ($p < 0.05$) at 0–2 and 2–4 weeks, however, at 4–6 weeks there was no significant difference. The feed cost per kg gain of N was higher than of B ($p < 0.01$). Among carcass characteristics the dressing percentage of N was less than of 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 were quite similar percentages of internal and external organ. The indirect meat quality in terms of pH value and cooking loss percentage was higher in the case of B ($p < 0.05$). However, thawing loss, drip loss and nutritive value showed no significant difference between the groups. Meanwhile, L and b values of B were higher than N ($p < 0.01$). The shear value of N in terms of maximum shear force (N), energy (J) and distance (mm) had higher values compared to B ($p < 0.01$).

Keywords: Broiler, carcass, meat, native thai chicken, productive performance

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