

Title Meat quality of Thai native and Gai Baan Thai chicken as influenced by sex, weight and muscle  
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### **Abstract**

Experiment was conducted to determine the influence of strain, sex, weight, and muscle on meat quality of the breast and thigh muscle of the Thai Native (T) and four lines crossbred (Gai Baan Thai; GB) from Tanow Sri Gai Thai farm. In each strain, there were two sex (male; 47 vs 56 and female 48 vs 58 birds of NT vs GB; respectively) and three live weight levels (1.3, 1.5 and 1.8 kilograms; respectively) and was conducted using 2 x 2 x 2 x 3 factorial in RBD. The results showed that GB had more yellow skin than NT, due to higher  $b^*$  value ( $p < 0.01$ ). While NT had meat which was darker, higher water holding capacity and less tender than GB. These can be explained as the NT had low  $L^*$  and high  $a^*$  value, low total and thawing loss percentages and tenderness score, higher shear force value and collagen content, respectively ( $p < 0.001$ ). Furthermore, NT had lower protein and lipid percentages than GB ( $p < 0.001$ ). Thigh had darker red color, less tender and higher fat percentage, so cooking and grilling loss percentages were higher while drip loss percentages were lower than the breast muscle ( $p < 0.001$ ). The female birds had higher fat and cooking loss percentage than males and tenderness score were decreased when increasing slaughter weight, except fat percentages and juiciness score were opposite ( $p < 0.05$ ). The results indicated that strain, sex, weight and muscle affected meat quality.