

Anupol Putsakul 2010: Study of Growth and Production in Betong Chicken (KU Line) and Analysis of Investment and Return. Master of Science (Agriculture), Major Field: Animal Science, Department of Animal Science. Thesis Advisor: Assistant Professor Panwadee Sopannarath, Ph.D. 162 pages.

The objectives of this study were to determine the effects of dietary protein, energy levels and sex on growth performances and to analyze investment and return of Betong chickens (KU Line) at 12, 14, 16, 18 and 20 weeks of age. Two hundred and eighty eight Betong chickens (KU Line) at 4 weeks of age were assigned to the 3×2×2 factorial in completely randomized block design with 2 blocks. The chicks were fed *ad libitum* with 3 levels of dietary crude protein (20, 18 and 16% CP) and 2 levels of dietary metabolizable energy (3,000 and 2,800 ME Kcal/kg) combinations in each sex (male and female). The results indicated that male Betong chickens had higher growth and carcass performances than those of female Betong chickens (KU Line) (P<0.05) for all ages. The suitable feed formulas for male Betong chicken (KU Line) raising under 16 weeks of age and over 16 weeks of age were at 18% CP 3,000 ME Kcal/kg and 16% CP 2,800 ME Kcal/kg, respectively. In contrast, the suitable feed formulas for female chicken raising under 16 weeks of age and over 16 weeks of age were at 18% CP 2,800 ME Kcal/kg and 16% CP 2,800 ME Kcal/kg, respectively. The analysis of investment and return of Betong chicken (KU Line) fed those 4 formulas were investigated with 6 percent of discount rate. These results indicated that selling carcass was better than selling live bird. The male chicken fed diet containing 18% CP 3,000 ME Kcal/kg had better financial investment and return at 16 weeks of age per 1 raising cycle. And female chicken fed diet containing 16% CP 2,800 ME Kcal/kg had better financial investment and return at 16 weeks of age per 1 raising cycle when selling live bird and at 18 weeks of age per 1 raising cycle when selling carcass.

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Student's signature

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Thesis Advisor's signature