

Pheerachit Chaiyaharn 2010: Influences of Body Conformation, Dietary fat levels and Feeding Period on Feedlot Performances, Carcass Qualities and Production Cost of Crossbred Beef Cattle. Master of Science (Animal Production), Major Field: Animal Production, Department of Animal Science. Thesis Advisor: Assistant Professor Suriya Sawanon, Ph.D. 90 pages.

Breeds, feed and management are important factors that attribute to accumulate the intramuscular fat. Therefore, the research objective was to study the diversity of body conformation, dietary fat levels and fattening period of crossbreeds between *Bos indicus* and *Bos Taurus*. Three body conformation of cross breed beef cattle (361.03 ± 19.93 kg) comprised of; 1) Big Body Structure (BBS), 2) Small Body Structure (SBS) and 3) Body Structure Different to the previous appearance (BSD). Dietary fat levels were 1) Control (C) and 2) High fat (>50 %; HF) Fattening periods were 1) 8 month (8 m) and 2) 6 month (6 m) Statistical analysis was tested under $3 \times 2 \times 2$ Factorial in Randomized Completely Block Design. Results of body conformation was not affected on performance and carcass quality. However the BBS contained higher skin percent than the other groups ($P < 0.01$) but digestive system and entrails weigh were lower than the other groups ($P = 0.05$ and 0.03 , respectively). Furthermore, the profit of BBS was higher than the other groups. Influence of dietary fat levels showed that the daily feed intake at 0–120 d of the HF group trended to be lower than the control group ($P = 0.06$). But daily feed intake of overall period of both groups was not significantly different. Meanwhile, KPH fat, kidney fat and back fat of HF group were higher than the C group ($P = 0.02$, < 0.01 and 0.03 , respectively) and also marbling score of HF group trended to be higher than the C group ($P = 0.10$). However the profit of the HF group was lower than the C group. Average daily gain of 8 m fattening was period trended to be lower than 6 m ($P = 0.07$). But fat percent in longissimus muscle of 8 m higher than the 6 m group ($P < 0.01$). Also KPH fat, kidney fat and back fat of 8 m group were higher than the 6 m group ($P = 0.02$, < 0.01 and 0.05 , respectively). However marbling score of both cattle groups were not significantly different ($P = 0.31$). Furthermore the profit of 6 m group fattening period had been better 8 m group.

Student's signature

Thesis Advisor's signature