

Walaithip Kanjan 2010: Effects of Partial Mixed Ration on Fattening Performance, Carcass Quality and Economic Return in Beef Cattle. Master of Science (Agriculture), Major Field: Animal Science, Department of Animal Science. Thesis Advisor: Associate Professor Sornthep Tumwasorn, Ph.D. 83 pages.

Two formulae of Partial Mixed Ration (PMR) were fed to steers to compare performance to the normal feeding practice. Eighteen steers were divided into 3 groups each of 6 steers. Group 1 received concentrate and rice straw supplemented with molasses as normally practice. Group 2 received PMR7%CP and group 3 received PMR12%CP instead of rice straw together with vinasses. All cattle received 14 percent crude protein of concentrates. The Initial body weights of all steers averaged 546.33 ± 66.19 kilograms and were finished at an average of 644.17 ± 79.81 kilograms for the last 6 months feeding period. The experiment used repeated measure in Randomized Completely Randomized Design.

The results showed that steer in group 2 had higher average daily gain and body weight gain than those in groups 3 and 1 ($P > 0.05$). Total dry matter intake was found to be 1.81 ± 0.11 , 1.21 ± 0.19 and 1.25 ± 0.09 % of body weight ($P > 0.05$). Blood glucose was found to be 64.36-69.35 mg% and blood urea nitrogen was found to be 9.25-13.65 mg%. The triiodotyronine was found to be 199.09-238.28 mg% and both parameters were in normal range.

The carcass quality from these steers were found to be the same for dressing percentage, back fat thickness, loin eye area and retail cuts ($P > 0.05$). It was found that group 1 had the highest cost of production than those of group 2 and 3 (10,179.64, 8,592.33 and 9,129.81 baht/head) and yield the net income of 8,526.48, 9,374.07 and 10,197.74 baht/head accordingly ($P > 0.05$).

Student's signature

Thesis Advisor's signature