

The objective of this experiment was to study appropriate levels of cassava chip in concentrate for producing good quality beef from male dairy calves. Twenty four calves obtained from Esarn Dairy Company and farmers were raised for this experiment. Dairy calves were fed with powder milk until 2 months old at the Khon Kaen University (KKU) and then randomly allotted for 4 dairy farms around 12 km from KKU (six calves per farm). The calves were assigned to receive 4 dietary treatments (corn meal used as an energy source and replaced by cassava chip at 0, 25, 50 and 75%). The calves were offered 1.5% of body weight with concentrate and urea-treated rice straw (5% urea) ad libitum for 7 months. Weight change and concentrate intake were monthly recorded. Feeds were sampled for chemical determination. At the end of feeding trial, three calves (averaging finishing weight 135 kg) from each dietary treatment were slaughtered to determine carcass composition, meat composition, meat quality and economic return. Means of all characteristics were analyzed for treatment difference using analysis of variance and Duncan's New Multiple Range Test.

The results revealed that male dairy calves gained between 0.35-0.43 kg/head/day. Average final finishing weight, carcass percentage and loin eye area for all treatments were 135 kg, 48% and 43.5 cm², respectively. Carcass composition (chuck, rib and round) from National Livestock and Meat Board style of cutting were similar among treatments. However, loin of carcass from calves received a 50% replaced by cassava chip were higher compared to other dietary treatments. Carcass composition from Thai style of cutting and chemical composition of meat from different dietary treatments were similar ($p>0.05$). Loin eye area of carcass from calves received 50% replaced cassava chip dietary treatment tended to be bigger, more fat and more tender compared to other dietary treatments. The economic standpoint showed cost of concentrate used for gaining 1 kg liveweight was between 22.12-30.35 B.