Ratchanee Bourapa 2014: Forage Utilization for Milk Production in Dairy Organic Farm.
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Thesis Advisor: Associate Professor Somkiert Prasanpanich, Ph.D. 195 pages.

There were 5 experiments under this study where the first experiment was conducted to investigate dry cattle manure as fertiliser for nutrient supply to Purple Guinea pasture. The pasture was divided into 12 plots and each plot size was 4 m x 6 m. Four levels of dry manure viz., 0, 1, 2 and 3 tons/rai as 4 treatments were randomly applied to 3 plots (replicates) under Completely Randomized Design. All plots were under rain-fed condition and were monthly harvested for soil the composition changes, leaf stem ratio and pasture kgDM yield. The results showed the highest pasture yield appeared to be in level of dry manure at 2 tons/rai. However, better changes in soil composition were found in all levels of dry cattle manure application.

Experiment 2: The utilization of mature Guinea grass of over 90 days old was provided to lactating cows under grazing and indoor cut and carried grass conducts supplemented with fresh chopped Leucaena. Total dry matter intake, milk yield content, blood biochemical contents, Volatile Fatty Acids (VFA) and NH_3-N concentrations, bodyweight changes and conjugated linoleic acid (CLA) content were not significantly. However, CLA content was higher than that from the indoor animals and cost of feed eaten per 1 kg of milk produced was lower than that from the indoor animals.

Experiment 3: The utilization of Guinea grass of 45 days old was provided to lactating cows under grazing and indoor cut and carried grass a supplemented with fresh chopped Leucaena. Total dry matter intake, milk yield contents, blood biochemical contents, VFA and NH_3-N concentrations and CLA content were not significantly. However, milk lactose content and Blood urea nitrogen (BUN) concentration of the indoor animals were highly greater than those of the grazed cows ($P<0.01$). However, CLA content was higher than and cost of feed eaten per 1 kg of milk produced was lower that from the indoor animals.

Experiment 4: The utilization of Guinea grass of 45 days old was provided to lactating cows under grazing and corn silage for indoor feeding supplemented with fresh chopped Leucaena. Total dry matter intake, milk yield content, bodyweight changes and CLA content were not significantly. It was obvious that CLA content was higher than and cost of feed eaten per 1 kg of milk produced was lower than that from the indoor animals.

Experiment 5: The utilization of Guinea grass of 45 days old was provided to lactating cows under grazing and indoor cut and carried grass supplemented with organic meal concentrate. Total dry matter intake, milk yield with milk composition, blood biochemical contents, VFA and NH_3-N concentrations and CLA content were not significantly. However, CLA content was higher than that from the indoor animals.

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