



Thesis Abstract

Utilization of Full Fat Copra in Feeding Dairy Buffalo (*Bubalus bubalis* L.)

By Anthony Francis S. Regaspi

MS in Animal Science, University of the Philippines Los Baños

Two studies were conducted to determine the effect of full fat copra supplementation on its nutrient digestibility and on the lactational performance of buffaloes. In Study 1, nine buffaloes were distributed to three dietary treatments following a completely randomized design: Treatment 1 (napier and concentrate), Treatment 2 (napier and concentrate with 7.5% full fat copra) and Treatment 3 (napier and concentrate with 15% full fat copra). The analyzed proximate composition of full fat copra on dry matter basis was as follows: 7.1% crude protein, 5.27% crude fiber, 70.8% crude fat, 1.73% ash and 15.1% nitrogen free extract. The inclusion of full fat copra in the diets did not significantly affect the coefficients of digestibility (DM, protein and energy), digestible protein and digestible energy of the dietary treatments. The metabolizable energy on dry matter basis of full fat copra obtained by difference method was 2972 kcal/kg and 2948 kcal/kg for treatments 2 and 3, respectively.

In Study 2, six lactating buffaloes were distributed to three dietary treatments in a latin square design. The animals were fed napier grass silage and brewer's spent grain, and distributed to three dietary treatments with different levels of full fat copra in the concentrate mixture: Treatment 1 (napier grass and concentrate), Treatment 2 (napier grass and concentrate with 7.5% full fat copra) and Treatment 3 (napier grass and concentrate with 15% full fat copra). Inclusion of full fat copra in the concentrate mixture did not affect live weight gain, milk production and milk composition of the lactating buffaloes. The average daily dry matter intake was higher ($P < 0.05$) when buffaloes were fed napier grass and concentrate with 7.5% full fat copra (15.6 kg) than when they were fed with napier and concentrate (15.3 kg) or napier grass and concentrate with 15% full fat copra (14.4 kg).

Economic evaluation of the diets revealed that the cost per kilogram of concentrate mixture increased with the inclusion of full fat copra. This was attributed to the price per kilogram of full fat copra, which was higher than the main ingredients of the basal diet, namely: yellow corn, rice bran D2 and copra meal.