

# The proper utilization of copra meal in diets for dairy goats <sup>(1)</sup>

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## Abstract

To exploit the available feed resources and their proper utilization, imported copra meal was added into diets for lactating goats to evaluate its effect on milking performance, milk fatty acid profile, milk acceptance and crude income. Two repeated trials with 28 days each were conducted. A total of 20 head Alpine and Saanen lactating goats each trial with milk yield above 2 kg a day were used. Goats were raised in individual pens and assigned into four groups randomly. Copra meal was added into diets at 0% (control), 8%, 16% or 24% (dry matter basis) by substituting part of the corn, soybean meal and pangolagrass hay. Four diets were formulated to have similar protein and energy content. The addition of copra meal did not affect the concentrations of fat, protein and total solid of milk but effectively decreased the milk urea nitrogen (35.4 vs. 40.0 mg/dL,  $P < 0.05$ ). Copra meal containing major the medium chain triglycerides (MCT) increased the MCT ratio in goat milk as expected ( $\leq C_{14:0}$ , 37.2 vs. 34.0%,  $P < 0.05$ ) and at the same time the ratios of long chain conjugated linoleic acids and polyunsaturated fatty acids also decreased. Capric acid ( $C_{10:0}$ ) the main flavor influential factor in milk decreased following the dietary addition of copra meal. This might elucidate the reason why the copra meal groups could improve their milk panel test results and finally the acceptance. Nevertheless, dry matter intake, milk yield and crude income of goats tended to be adversely affected by the copra meal addition, especially the 24% highest group. Comparing with the control group, diet with 24% copra meal decreased goat dry matter intake by 16% (1.76 vs. 2.09 kg/d,  $P < 0.05$ ) and dropped milk yield by 13% (2.59 vs. 2.97 kg/d,  $P < 0.10$ ), respectively. The remarkable high NDF (48.5%) and low nonstructural carbohydrate (18.9%) contents could contribute to the low performance. In summary, copra meal could be an available feedstuff for lactating goat in Taiwan. The suitable recommended ratio in diet dry matter is suggested to be 16%.

Key words: Copra meal, Dairy goat, Milk fatty acid profile, Milking performance, Panel test.

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