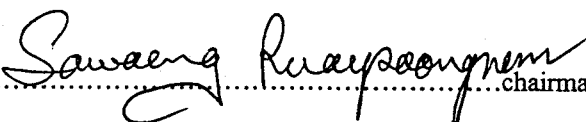
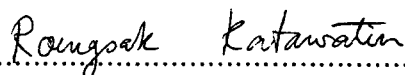


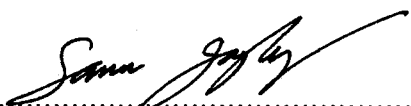
THESIS TITLE : ON-FARM TECHNOLOGY TESTING FOR PEANUT PRODUCTION
AFTER RICE IN THE KUNG KRABAEEN BAY DEVELOPMENT STUDY
CENTER : CASE STUDY OF BAN NONG HOI AND BAN THA SALA

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ABSTRACT

Kung Krabaen development study center has been initiated to demonstrate on the approaches of sustainable natural resources development for livelihood improvement of both local and surrounding inhabitants. Main development themes are both fishery development and conservative utilization of the natural for balance of the ecosystem. From a study at Rumpan subdistrict, Thamai district, Chantaburi province, it was found that the area is a flat plain tilted to the south and surrounded by undulating landscape in the north, east and west. The average annual rainfall is around 2775 mm. and the major soil series are Chumporn, Sattahip, Makam, and Klaeng. As such the area could divided into 3 major agriculture activity zones, (1) the area where rice is the main crop with peanut in dry season as supplementary crop (2) the area where activity mixture of rice, vegetable, field crop, fruit tree, rubber plantation and livestock, and (3) the area with mainly fruit tree and rubber plantation. For short duration income generation, zone 1 was

found to be suitable for the study. The peanut production in the area might have problems of excess utilization of chemical fertilizers from probably unsuitable variety, which could cause low net income and create long-term soil environmental problems. In order to verify the hypothesis, experiment was carried out in 2 villages of zone 1 for potential suitability of soil and crop management in the project area. Tested sites were at Nong Hoi and Tha Sala villages whereby most of the soil was loamy Klaeng soil series. The test began in December 1997, using 2x2 Factorial Experiment in RCBD with 6 replications, and replications were under the basis of different farmers. The first factor was varietal differences, and the second one was 2 fertilizer rates. Peanut crop was destructively harvested at 91- 95 days from sampling site of 3x4 m².

The results indicated that both peanut varieties could grow well, especially Khon Kaen 60-1, which grew taller than Tainan 9. Biological yield at flowering stage of Khon Kaen 60-1 was higher than Tainan 9. At final harvest, pod and seed yields of Khon Kaen 60-1 were 334 and 241 kg/rai, respectively. Both the pod and seed yields were significantly higher than Tainan 9 yield by 273 and 200 kg / rai, respectively. There was no difference in yields from different fertilizer treatments. Regarding to economic return of the technology, it was found that the return was higher if farmers grew Khon Kaen 60 - 1 with DOA fertilizer recommended rate.

The findings suggested that technology of peanut production after rice in the project area was found to be relatively suitable for Khon Kaen 60 - 1 with DOA fertilizer recommended rate. The results could serve an objective of the King's project, especially on income generation from agricultural activities. As such, probably, the practice could well be continued for the target of Kung Krabaen development project. However, if the technology would be transferred to other similar agroecosystems, soil analysis should be integrated to the testing system. For sustainable soil resource, nutrient balance and overall production outputs should also be considered, particularly on rice – peanut production system. Moreover, as income-generating alternative, it should be considered on crop growth requirement for peanut, economic return, and environment condition to support production of peanut after rice.