

Manop Techadisai 2010: An Action Research to Evaluate Maize Cropping Pattern Suitable for Farmer Cultivation of Klongsai Village, Wang Nam Khiao District, Nakhon Ratchasima Province. Master of Science (Sustainable Land Use and Natural Resource Management), Major Field: Sustainable Land Use and Natural Resource Management, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Rungsarid Kaveeta, Ph.D. 126 pages.

This research aims to evaluate and find the pattern of maize cropping which is appropriate to Klongsai village and to study the result of the pattern towards the economic, society and environment. The method of the study consisted of interviewing, soil analyzing and cropping experiment using CP 888. Land preparation was done by plowing towards the slope direction. The first pattern was to apply 16-20-0 fertilizer at 50 kg./rai before planting and plant blooming. The second one was to apply 16-20-0 fertilizer at 50 kg./rai before planting, 46-0-0 after 21 days planting at 50 kg./rai and 16-20-0 at 50 kg./rai before plant blooming. The last pattern was to apply 16-20-0 fertilizer at 50 kg./rai before planting, 46-0-0 after 21 days planting at 50 kg./rai and 16-20-0 at 25 kg./rai before plant blooming. The result indicated that the corn planted in the second pattern showed better growth, quality and quantity. In 50% silking, there were 5-6 cm. higher plant height, 2-3 cm. longer ear length, 0.2-0.4 cm. longer ear diameter, 6 g. higher seed weight (100 seeds), and 115.2-152.4 kg./rai higher productivity. In case of cost, productivity and net income, it was found that the first pattern had the lowest cost, 4,046.38 baht/rai in average. The second pattern provided the highest productivity, 902.99 kg./rai in average and also the best net income of 1,599.16 baht/rai. From the analysis, there was no significant difference of soil fertility in each pattern both before and after planting. From the in-depth interview, all subjects strongly agreed with the planting pattern changes, especially for the second one, which provided the better productivity and income.

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Student's signature

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Thesis Advisor's signature