

Jitti Janpapas 2011: Effect of Organic and Chemical Fertilizer on Yield and Net Return of Maize Farmers, Tak Fa District, Nakhon Sawan 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: Assistant Professor Jutamas Romkaew, Ph.D. 123 pages.

Effect of organic and chemical fertilizer on growth, yield, soil chemical properties, net return and adoption of maize farmer was conducted at Tak Fa District, Nakhon Sawan province. Farmer selection and community meeting were arranged to set up the use of fertilizer application in maize production by matrix ranking. Four selected farmer; Mr.Surin Somsuk, Mr. Vichan Srideth, Mrs. Buala Tomo and Mrs. Raerai Panpui participated in this experiment. Five treatment of fertilizer application was arranged in randomized complete block with 4 replications. Treatments consisted of 1) farmer practice method 2) Department of Agriculture recommendation 3) half of farmer practice method with manure fertilizer 4) half of farmer practice method with green manure fertilizer and 5) half of farmer practice method with green manure and manure fertilizer. The result showed that all of treatments did not affected to plant height at all growth stages, 100 seed weight, shelling percentage, ear yield and grain yield. Organic matter increased after using, half of farmer practice method with manure fertilizer, half of farmer practice method with green manure fertilizer and half of farmer practice method with green manure and manure fertilizer. For net return in maize production, it was found that farmer practice method gave the highest in net return following by half of farmer practice method with manure fertilizer. Whereas, half of farmer practice method with green manure and manure fertilizer gave the lowest in net return. From farmer adoption on fertilizer application, yield, total cost, net return and soil fertility, it was found that farmer practice method and half of farmer practice method with manure fertilizer were adopted by farmers.

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