The Study on Compost, Chemical Fertilizer and Soil Amendment Combination in Irrigated Chinese Cabbage-michilli Production Using Farmer Participatory Approach: The Case of Nong Hoi Royal Project Development Center

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Abstract

The project was studied at Nong Hoi Royal Project Development Center in Chiang Mai province in 2011. The objective of this project was to investigate soil management technology in highland area for appropriate and sustainable vegetable growing using farmer's participation to acquire more acceptable from them. The experimental design was randomized complete block design (RCBD) with 6 treatments and 4 replications. There were (1) without dolomite and without fertilizer application (Control method), (2) chicken dung in combination with chemical fertilizer at farmer's rate (Farmer practice), (3) dolomite in combination with chicken dung and chemical fertilizer at farmer's rate, (4) dolomite and compost, (5) dolomite in combination with compost and chemical fertilizer at half of farmer's rate, and (6) dolomite in combination with compost and chemical fertilizer at farmer's rate. The result showed that planting of vegetables using dolomite in combination with chicken dung and chemical fertilizer at farmer's rate (Treatment 3) gave the highest yield and thus the highest economic return. Farmers were the most satisfied with this treatment. They paid much interest and accepted the method for soil improvement on the highland. Furthermore, soil analysis revealed that soil density, organic matter content, phosphorus and potassium decreased in all treatments. While pH, calcium and magnesium increased.

Keywords: Soil improvement, Farmer participatory approach, Nong Hoi Royal Project Development Center