

Effect of soil improvement for growth and yield of rice and crop after rice

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Abstract

Effect of soil improvement for growth and yield of rice and crop after rice was conducted in farmer field at Ban Nonchai, Tambon Nong bua, At - Samat district; Roi-et province during 2006 - 2008. The experimental design was observation trial arrangement with 4 treatments. There were : farmer practice (applied granules organic fertilizer at the rate of 50 kg/rai), farmer practice combination with jack bean (*Canavalia ensiformis*) as green manure crop, farmer practice combination with bentonite at the rate of 3 ton/rai and farmer practice combination with jack bean as green manure crop and bentonite at the rate of 1.5 ton/rai. The result revealed that rice applied with granules organic fertilizer at the rate of 50 kg/rai combination with 3 ton/rai of bentonite gave the highest average yield about 652.22 kg/rai. For Watermelon planted as crop after rice, data showed that the highest average yield was 2,684.80 kg/rai as effected by applying with granules organic fertilizer at the rate of 50 kg/rai combination with green manure crop (jack bean) and bentonite at the rate of 1.5 kg/rai; and this treatment also gave the highest average net income of 18,044.03 baht/rai. Moreover, soils chemical fertility analysis compared before and after studied showed that the average amount of organic matter, phosphorus, potassium, calcium and magnesium were increased. while soil acidity was decreased.

Keywords : soil improvement, rice and crop after rice, granules organic fertilizer, bentonite