

ชื่อเรื่อง

Effects of Vetiver Grass and Leucaena for Soil Erosion Control in Sugarcane, Maize and Cassava Crop Practices

ชื่อผู้วิจัย

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Abstract

Four experiments on the effects of vetiver grass and leucaena in sugarcane, maize and cassava (grown early and at nearly the end of rainy season) crop practices were conducted during 1993-1995 in a farmer's field at Tambon Huai Bong, Amphoe Dan Khun Thot, Changwat Nakhon Ratchasima. The experimental plots were in a soil with sandy loam surface on three, four, five and six percent slope respectively. The experimental design of all experiments was randomized complete block with four replications. Each replication consisted of four treatments: one and two-rows of vetiver grass strip, one-row of leucaena strip and the control.

Results obtained from the experiments revealed no significant difference among treatments in the amount of soil loss due to erosion in the first and second year in sugarcane. On the other hand, in maize, the control treatment showed the highest amount of soil loss with an average of 7.236 ton/ha which was significantly higher than that of the one-row of vetiver grass strip treatment in the first year. In the second year, the control still showed the highest amount of soil loss with an average of 16.753 ton/ha. This was highly significant different from all other treatments. For cassava grown in early rainy season, the different treatments did not show any significant difference in the amount of soil loss in the first year. However, in second year the amount of soil loss obtained from the control was 44.107 ton/ha which was about six times higher than that from the other treatments. In another cassava plot grown near the end of rainy season, the data showed no significant difference in the first year, however, in the second year the control gave the highest soil loss with an average of 23.03 ton/ha. This was significantly higher than that of the two-row of vetiver strip treatment. In these experiments it was found that the yields of sugarcane, maize and cassava in different treatments were not significantly different.