

Effect of soil and water conservation measure to control soil erosion in corn plantation on up land in Nong Mot soil series (Nm) soil series group No.29 at Wiang Pa Pao District, Chaing Rai Province

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Abstract

The studied on effect of soil and water conservation measure to protect soil erosion in corn plantation on up land in in Nong Mot soil series (Nm) soil series group No.29 at Wiang Pa Pao District, Chaing Rai Province, during 2551-2553. Under the objectives for study the effect soil and water conservation methods to soil erosion in corn plantation on upland, the method of soil and water conservation that suitability in corn plantation upland system and study change of soil chemical and physical properties when different soil management. The experiential design was Observation rail **with** 5 treatments include Treatment 1 Control (no soil and water conservation system), Treatment 2 Hillside ditches+vetiver grass 1 row, Treatment 3 Narrow based terraces, Treatment 4 Vetiver grass 2 row and Treatment 5 Vetiver grass+orchard (mango tree). The result can conclude;

1) Soil and water conservation method that studied all 4 method can not reduce value soil eros in corn plantation on upland when compare with control that have equal the length of area, but it can protect soil sediment flow to stream high efficiently when compare with control.

2) Soil and water conservation method that suitability in corn plantation upland system is narrow based terraces (Treatment 3) can reduce soil sediment 4/5 of control. Subordinate is Hillside ditches+vetiver grass 1 row (Treatment 2) and Vetiver grass+orchard (Treatment 5) reduce soil sediment 1/2 of control. Final is Vetiver grass 2 row (Treatment 4) reduce soil sediment 1/3 of control.

3) Soil and water conservation method have effect on soil properties less than soil management when compare with no soil and water conservation method that have equal length of area.

Keywords: corn, soil and water conservation measure, erosion