

Soil and water conservation for pineapple production on soil group 44

Kamchai Kanjanatanaset

Abstract

The research project on soils and water conservation for pineapple production on soil group 44 was conducted on farmer's crop field at Samphun Nam village , Hin Lek Fai sub-district, Hua Hin district , Prachuab Kirikan province , during 2004- 2006 . The objective is to search an appropriate soil and water conservation system for pineapple production and comparision of pineapple yield and economic return in various soil and water conservation systems . The experiment was designed in observation trial with two replications of five treatments such as 1) control (no planting vetiver strip) 2) planting of 3 strips with 2 rows each of vetiver on contour level with 10 metre interval of each strip 3) same as 2 and covered with cut vetiver leaves on soil surface 4) planting of 2 rows of vetiver around crop field 5) same as 4 and covered with cut vetiver leaves on soil surface . The chemical fertilizer 20-20-15 kg of N- P₂O₅ K₂ O/ rai was applied as soil analysis . The result was found that vetiver less affected to soil chemistry properties . When the experiment was finished , soil chemistry was not much changes. For the amount of yield and fresh weight of pineapple , it was found that both of no planting and planting of vetiver showed no significance. For the first year soil losses in all treatments were not significant , but significant in the second year . It was found that planting of 3 strips of vetiver reduced soil losses at the most of 51-53 % . For planting of vetiver around crop field reduced soil losses 27-33 % . For no planting of vetiver with mature growth of pineapple reduced soil losses 29 % , compared to the young pineapple in the first year. For economic return ,it was found that most treatments gave the minus economic return (loss of revenue) Due to, in the first year , there was inadequate rainfall . It affected the growth of pineapple shoot. Furthermore, the decrease of yield price also affect economic return .

Keywords soil and water conservation, pineapple, soil group 44, vertiver grass