Planting the tea (Camellia sinensis) with soil and water conservation measure on high land

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Abstract

Planting tea (*Camellia sinensis*) with soil and water conservation measure was conducted in October 2009 to September 2011, in meuang district ,chaing rai province. The experiment design was observation trial , five treatments were study , 1) planting the tea, strip cropping (tea-coffee) as the soil and water conservation measure, 2) planting the tea , hill side ditch as the soil and water conservation measure, 3) planting the tea, bench terrace as the soil and water conservation measure , 4) planting the tea, vetiver grass strip as the soil and water conservation measure, 5) planting the tea without soil and water conservation measure.

The result was show that soil loss in plots of planting the tea (Camellia sinensis) with soil and water conservation measure was trend to decrease when compare with those on non soil and water conservation measure (average soil loss 482-1,562 kg./rai/year in soil and water conservation plots and 4,593 kg./rai/year in no soil and water conservation measure plot). The suitable soil and water conservation measure was hill side ditch . The yield of tea in 3 years after planting in all plots was non significantly, except in the plot of bench terrace as the soil and water measure, the yield of the tea in soil and water conservation plots were highest than non soil and water conservation plot.

The effect of soil management in this trial on soil chemical properties was slightly chance when compared before trial. In all treatments, soil reaction was very strongly acid, soil organic matter content, available phosphorous and potassium was trend to increase.

Keywords: tea, soil and water conservation measure, hill side ditch