

### Abstract

Study of LDD soil testing kit for chemical fertilizer recommendation for rice in Nan Province. Rice (RD.6) production in soil series Group No.5 (Hang Dong series:Hd).The objectives of the research are the effects of chemical fertilizers on appropriate soil management and sustainability for rice growing and yield of Rice (RD 6) variety and study on economic return. The experiment was Randomized Complete Block Design with 4 replications, there were 6 treatment. They were T1.) control (no chemical fertilizer). T2.)chemical fertilizers rate by farmer . T3.) chemical fertilizer in rate by Rice Department recommend. T4.)chemical fertilizer in rate of Uptake N-INS, Critical P,K T5.) chemical fertilizer in maximum rate of recommend from Rice Department. T6.) chemical fertilizer in rate of LDD Soil Test Kit.

The results showed that yield of rice (RD.6) has responded to each chemical fertilizer rate significantly . T4 (chemical fertilizer in rate of Uptake N-INS, Critical P,K) had optimum yield of rice (RD.6) were 752 kilogram per rai. But non-significant with T2, T5 and T6 (Yield of rices were 717,611,712 and 739 kilogram per rai). But chemical fertilizer rate by LDD soil test kit was Benefit and Cost Ratio (B/C ratio) was 1.38 ,which suitable to be used in assessing the farmers fertilizer in rice fields to reduce costs and increase productivity .