122/B

Effect of chemical fertilizer on yield of cocoa (*Theobroma cacao* L.) at wet zone mid country 3b (WM-3b)

P R Idamekorala[1*], W D L Gunaratne[2], H D A K Gunaratne[1] and M L Karunaratne[1]
[1]*Research Station, Dept. of Export Agriculture, Matale*
[2]*Department of Export Agriculture, Peradeniya*

National average of cocoa yield is around 332 Kg/ha/yr, though the potential yield is over 1000 Kg/ha/yr. One of the main reasons for the gap is poor management practices and out of that soil

fertility management is very often neglected. Therefore this experiment was conducted to study the N,P and K requirements of cocoa.

A field experiment was conducted at Export Agriculture Research Station, Matale in mid country wet zone-3b (WM-3b). Main fertilizer treatments consisted with two levels of N (100 and 150 g/plant/yr), two levels of P (50 and 75g/plant/yr) and three levels of K (60,120 and 180g/plant/yr). The experiment arranged in a Randomized Complete Block Design (RCBD) with three replicates and each plot consisted with nine plants.

According to the result response for applied Nitrogen varied from year to year. Response for Phosphorus was not prominent. But application of potassium caused to increase the cocoa yield. K treatments were significantly difference with control. But there was not significant difference between 120 g K_2O and 180 g K_2O . However result confirm that cocoa require a higher amount of K fertilizer. Based on the results it needs to increase current level of K_2O/plant from 90g to 120g.

*prasadri@yahoo.com Tel: 081-2420018