INFLUENCE OF SOIL TYPE AND SELECTED SOIL MORPHOLOGICAL PROPERTIES ON THE YIELD OF COCONUT *(COCOS NUCIFERA)* IN SRI LANKA 11. WALPITA ESTATE. KOTADENIYAWA.

P. Loganathan

(Coconut Research Institute, Lunuwila)

The influence of soil type on nut yield and flowering characteristics of young coconut (Less than 19 years) on a 10 ha land in the Wet Zone was investigated. Detailed soil survey of the area revealed that there are four soil series — (1 a) Boralu-shallow phase (Plinthudults), (1 b) Boralu-deep phase (Plinthudults), (2) Sudu (Quartzipsamments), (3) a variant of Katunayake (Quartzipsamments), and (4) Rathupasa (Quartzipsamments) which produced yields of. 47, 55, 62, 63 and 65 nuts/palm year respectively, Although the palms in Sudu soils produced high nut yield, they came into bearing later than the others due to the impeded drainage conditions.

Yields were higher on soils having greater soil depths, gravel depths (depth at which gravels begin to appear), lighter texture and moderately good drainage. In light and medium textured soils, soil depth had a significant bearing on yield; a depth of 120 cm appeared to be the critical depth. At a depth of 140 cm, yield was significantly affected by texture. Lighter textured soils had a significantly higher proportion of high yielding palms than heavier textured soils. The interaction between gravel depth and texture on yield was similar to soil depth and texture. A gravel depth of 60 cm appeared to be the critical level for light textured soils. Under moderate and good drainage, yield continued to increase with both soil and gravel depths without any indication of a critical depth. Generally, under any gravel or soil depths, "moderately well" drained soils were preferred to well drained soils.