

CHARACTERISTICS, GENESIS AND CLASSIFICATION OF SOILS UNDER *HEVEA* IN MIZORAM, NORTH-EAST INDIA

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The morphology, physico-chemical properties and exchange characteristics of five representative pedons of soils under rubber (*Hevea brasiliensis*), at different altitudes, in Mizoram were studied and classified as per soil taxonomy. The soils in general were deep, well drained with rapid permeability and have mixed clay mineralogy. The texture of lower altitude soils at 150 and 280m above mean sea level (msl) ranged from silty clay loam at the surface to clay in the lower solum whereas soils at 400 and 500m above msl were sandy clay loam to clay loam. The soils showed considerable homogeneity and exhibited A-Bw-C to A-Bt C profiles. They were strongly acidic to very strongly acidic and high in organic carbon which showed a decreasing trend with depth. Exceptionally high acidity had resulted in low cation exchange capacity and poor base status of the soils. The soils of pedon at altitudes 150, 280 and 750m above msl were classified as Typic Hapludults whereas soils at 400 and 550m above msl were Umbric Dystrochrepts.

Key words : *Hevea brasiliensis*, Mizoram, Rubber, Soil characteristics, Soil classification.

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INTRODUCTION

Rubber (*Hevea brasiliensis*) trees can grow in a vast majority of the acid soils of the humid tropics. However, its performance and economic viability can be severely restricted where deep, very acid peat, rocky parent material is present and drainage is excessive or impeded. It thrives well in the laterites, lateritic and red soils of India formed under tropical wet-dry climate (Krishnakumar, 1989).

Mizoram is endowed with distinct physiography units and the entire area is hilly. In the climosequence ranging between

perhumid tropic and humid cool sub-temperate, varied types of soils have developed in Mizoram at different altitudes on similar type of parent materials. The acid soils of foot hills below 450 m above mean sea level (msl) developed under warm humid sub-tropical climate which run north to south along the western belt of Mizoram are fairly suitable for growth and yield of rubber. The study of soil properties in the field and in the laboratory and their placement in the soil taxonomic system is imperative to understand the nature, origin, genesis and prob-