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FERTILITY EVALUATION OF RUBBER GROWING SOILS OF MEGHALAYA

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Soil samples collected at two depths (0-30 and 30-60 cm) from the rubber growing areas of Meghalaya were analysed for available nutrient status. The organic carbon (OC) content ranged from 5.7 to 21.6 g kg^{-1} and the mean value was 11.7 g kg^{-1}. Highest OC content was recorded in West Garo Hills and lowest in South Garo Hills. In the entire Meghalaya state, 79.40 per cent of soil samples were recorded OC content in the medium range. The nutrient index value for organic carbon for the state as a whole was 1.99 indicating medium range of organic carbon status. Available phosphorus (P) was very low for all the districts and the lowest in South Garo Hills (1.79 kg ha^{-1}). Majority of the samples from all the districts where rubber is cultivated have shown low available and nutrient index values ranged from 1.00 to 1.02 and the fertility rating for available was low for the entire rubber growing areas of Meghalaya state. Wide variation in available potassium (K) content of the rubber growing soils of Meghalaya was observed. The available K ranged from 91.8 to 318.1 kg ha^{-1} and the mean available K was 167.8 kg ha^{-1}. Nutrient index values for available K ranged from 1.92 to 2.10. Fertility rating for available K content was found to be medium for the entire rubber growing soils of Meghalaya. The soil pH ranged from extremely acidic (3.97) to moderately acid (pH 5.41) and 64 per cent soil samples recorded pH between 4.5 to 5.0.

Keywords: Available nutrients, Organic carbon, Rubber, Soil fertility

INTRODUCTION

Rubber cultivation in the north eastern region of India was mostly confined to few public sector plantations till late 1970s. The crop, however, attracted public attention and the incentives offered by the Rubber Board contributed to the expansion of area in the small holding sector. The scheme for accelerated development of rubber plantations for the north eastern region since 1984-85 resulted in real expansion particularly in small holding sector. At present 1,01,685 hectares area is under rubber cultivation in the north eastern region of India and out of these 9,196 hectares is in the Meghalaya state (Rubber Board, 2012). About 80 per cent of total rubber growing areas in Meghalaya are in all the three districts of Garo Hills and Ribhoi district.

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