AVAILABLE NUTRIENT STATUS OF RUBBER GROWING SOILS IN THE LOWER BRAHMAPUTRA VALLEY OF ASSAM

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The status of nutrients in rubber *(Hevea bratiliensis)* growing soils of lower Brahmaputra valley of Assam was studied for understanding the soil fertility. The soils were acidic to strongly acidic in nature and majority of them were medium in organic carbon, low in available phosphorus and medium in potassium. Wide variation in fertility ratings indicates that these soils require specific management measures to maintain fertility depending on the age of the rubber plantation.

Key words: Assam, *Hevea brasiliensis*, North East India, Nutrient status.

The rubber (*Hevea brasiliensis*) cultivation in Assam is mainly confined to lower Brahmaputra valley with total area of about 20,222 sq. km. comprising 25.75 per cent of the state. Entisols (new alluvium), alfisols (mountainious valley) and ultisol (laterised red soils) are the major soils present in the valley. The present note reports on the nutrient status of rubber growing soils of the lower Brahmaputra valley of Assam.

One thousand five hundred and ninety eight soil samples collected during 1997 to 2000 for advisory purpose have been utilised for evaluation of fertility status. The samples were air dried, pulverised and passed through 2 mm sieve before analysis. Standard methods were followed for determining soil pH (1:2 soil : water suspension), organic carbon (OC), available phosphorus (P) and potassium (K). The soils were categorised into low, medium and high status considering the critical limits as suggested by Pushpadas and Ahammed (1980).

Nutrient index values for OC, P and K were calculated by multiplying the percentage of soil samples (out of total number of soil samples analyzed for a given area) falling into low category with respect to any nutrient by a factor 1, those falling into medium category by 2 and those from high category by 3. The sum of this is divided by 100 and the value obtained is the nutrient index for that area with respect to that particular nutrient (Parker *et al.*, 1951). For interpretation of nutrient indices, the limits suggested by Ramamoorthy and Bajaj (1969) were adopted. An area with a nutrient value of 1.67 or less is considered as low, between 1.67 and 2.33 as medium and above 2.33 as high.

In general, the soils were very acidic to strongly acidic and the pH values varied from 3.95 to 5.99 (Table 1). This indicates that these soils have developed from non-calcareous parent materials under conditions of high rainfall. Majority of the soils were

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