

LEAF NUTRIENT CONCENTRATION OF DIFFERENT CLONES OF RUBBER

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Leaf nutrient concentrations of different clones of rubber (*Hevea brasiliensis*) were compared under two separate studies to find out variations among the clones. In the first study, comparisons were made for two years from the leaf analytical values of different clones from two field experiments. In one experiment, significant variation was observed for N, P, K, Ca and Mg during the fifth year from planting. During the seventh year from planting, micronutrients Fe, Mn and Zn were also compared and variation was observed only for N and Fe. In the other experiment, significant variation for N, P, K, Ca and Mg were observed for both the years. Among the micronutrients significant difference was observed for Fe. In a separate study leaf nutrient values for N, P, K, Ca and Mg of five popular clones from a large data base were compared and significant difference was observed among the clones.

Key words : Clones, *Hevea brasiliensis*, Leaf nutrient concentration.

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INTRODUCTION

Leaf is metabolically the most active part of any plant and its composition is, therefore, a good guide to the plants' nutritional status. Nutrient concentration of the plant is influenced by various factors like soil, climate, management practices, physiology, nutrition, genotype and root system. Cultivar differences in the uptake of K and Mg and in the expression of deficiency symptoms in vines have been reported (Loue *et al.*, 1984). Gagnard (1984) observed significant intervarietal differences in the leaf contents of P, K and Ca of apple over a wide range of growing conditions.

Foliar analysis is now widely practiced in rubber for assessing fertilizer requirement, in conjunction with soil analysis. Sampling techniques (Shorrocks, 1962) and interpretation of data in relation to

plant characteristics and growing conditions have been reported (Shorrocks, 1965a, 1965b; Pushparajah and Guha, 1968; Guha and Narayanan, 1969; Pushparajah and Tan, 1972). Pushparajah and Tan (1972) also reported influence of clones on the leaf nutrient concentration in respect of N and K. Studies to find out variations in leaf nutrient concentration among different clones will be very useful in improving the method of prognosis of leaf analytical values for providing clone specific fertilizer recommendations.

MATERIALS AND METHODS

Leaf samples were collected from different clones from two experiments on multidisciplinary evaluation of modern clones at the Rubber Research Institute of India. The experiments were laid out in randomised block design with 13 clones