

LEAF AGE AND NUTRIENT STATUS OF *HEVEA BRASILIENSIS*

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Three experiments were carried out to study the variations in nutrient status of *Hevea* (clone RRH 105) leaf with respect to age under Indian conditions. The leaf N content was found to slightly increase initially and then decrease and stabilize while P, K and Mg contents did not vary much with age. However, a decreasing trend was observed in the case of these elements. Conversely, the Ca content steadily increased with age of leaf. The variations in nutrient contents of leaves were comparatively small during the period between 220 and 310 days. Hence this period can be considered as ideal for leaf sampling. The period can be widened to between 230 and 320 days, if corrections for N content are applied.

Key words : *Hevea brasiliensis*, Leaf age, Leaf nutrient, Leaf sampling.

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INTRODUCTION

Leaf analysis is a widely accepted method for plant nutrient diagnosis. For efficient utilization of this technique, utmost care is necessary in selecting the period of sample collection and method of tissue analysis. Nutrient content in leaf depends considerably on its age primarily because of the dynamic nature of nutrients in plants. Hence proper time to select the appropriate tissue samples for the analysis need to be evolved for each crop to ensure precision in diagnosis of nutrient sufficiency/deficiency.

In the case of *Hevea*, the use of leaf analysis as a diagnostic tool was initiated by Chapman (1941). Later, Shorrocks (1961; 1962 a,b,c; 1965) made considerable contributions in optimising several factors in the sampling methodology like position and type of the sampled leaf, age of the leaf, time of sampling etc. under Malaysian condi-

tions. Silva (1975) suggested ideal period for leaf sample collection in Sri Lanka by studying the variations in leaf nutrient contents in relation to leaf age. Nualsri *et al.*, (1973) made similar studies in Thailand. However, detailed investigations in Indian conditions are lacking. At present leaf samples of *Hevea* are collected during the period from August to October in India. However, the leaf nutrient content varies with leaf age and thus with the date of sampling. Guha and Narayan (1969) observed that the leaf nutrient contents of *Hevea* are not comparable with critical values without considering the leaf age factor. Moreover, the age of the leaf depends on the time of refoliation which may vary from year to year. The present study was taken up to assess the nutrient variations in leaf with respect to its age and to identify the most suitable period for leaf sample collection in India.