

RESPONSE OF TWO HIGH YIELDING *HEVEA* CLONES TO APPLIED FERTILIZERS DURING IMMATURE PHASE

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The results of a 2^3 factorial experiment conducted at two locations with two high yielding clones (RRH 105 and PB 235) of *Hevea brasiliensis* are discussed in relation to growth and soil fertility characteristics. Application of N, P_2O_5 and K₂O at the rate of 30, 30 and 20 kg per ha respectively resulted in significant increase in girth and girth increment in both the clones. Clone PB 235 responded to the application of fertilizers during the entire period of immaturity, whereas RRH 105 responded only during the early immaturity period.

Key words : Fertilizer response, Growth, *Hevea*, Immaturity period, Tappability.

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INTRODUCTION

The use of fertilizers for good growth and productivity in *Hevea* is well documented. Adoption of a generalised fertilizer recommendation in rubber is likely to cause imbalance in the available nutrients, mainly due to the variation in the inherent soil nutrient status of the location under cultivation (Potty *et al.*, 1976; Yogaratnam *et al.*, 1984). Variation in response to applied nutrients in different locations has already been reported (Ananth *et al.*, 1966; Potty *et al.*, 1976). Similarly, clonal differences exist in the fertilizer requirement (Bolle-Jones and Ratnasingam, 1951; Shorrocks, 1965). The need for making distinction among clones in the assessment of fertilizer requirements based on leaf nutrient contents to arrive at clonewise recommendations for economical and efficient fertilizer use has

already been brought out (Abdulkalam *et al.*, 1980). The present study was taken up to evaluate the growth response of two high yielding clones to graded doses of fertilizers at two locations of varying soil fertility and to arrive at optimum NPK requirement.

MATERIALS AND METHODS

One experiment was laid out at Tumahur with clone PB 235 in 1985 and another at Kulasekharam with clone RRH 105 in 1986. These two locations are situated in the major rubber growing tract of South India. The design of the experiments was 3^3 factorial RBD confounding the higher order interactions. Polybag plants of the respective clones were used as planting material. The spacing adopted in the first location was 6.65 x 3.35 m and in the second, 4.9 x 4.9 m with 30 plants per plot in the