

## A COMPARATIVE ANALYSIS OF COMMERCIAL YIELD PERFORMANCE OF *HEVEA* CLONES IN INDIA

Joseph, T., Chandu, B., Lekshmi, S. and Viswanathan, P.K.

Joseph, T., Chandu, B., Lekshmi, S. and Viswanathan, P.K. (1997). A comparative analysis of commercial yield performance of *Hevea* clones in India. *Indian Journal of Natural Rubber Research*, 10(1&2) : 6-14.

The study analysed the comparative commercial yield performance and related aspects of 19 *Hevea* clones during the first ten years of tapping based on information on 167 fields in the estate sector, with an area of 6881.24 ha. The analysis covered comparison of yield per ha, yield per tree, share of field coagulum (FC), tappable stand, tapping intensity, season-wise yield composition and a comparison of yield rates of India with those of Malaysia. The clone RRIM 105 was found to be the highest yielding and reported relatively lower FC, higher tappable stand and lower tapping intensity. The RRIM clones other than RRIM 539 were low yielding and reported higher FC, lower tappable stand and higher tapping intensity. The PB clones showed diverse trends but among them PB 24/59, PB 260 and PB 217 were found to be high yielding ones. For the eight clones compared, the commercial yield in Malaysia were found to be higher than those in India.

**Key words :** Clone evaluation, Commercial yield, Field coagulum, Natural rubber, Planting material, Tapping intensity.

T. Joseph (for correspondence), B. Chandu, S. Lekshmi and P.K. Viswanathan, Rubber Research Institute of India, Kottayam - 686 006, India.

### INTRODUCTION

Management of perennial crops like rubber (*Hevea brasiliensis*) is an enduring activity demanding prudent planning which involves judicious selection of cultural practices proven by scientific evidence and confirmed by commercial experience. A decisive determinant of the operational efficiency of a rubber plantation is the yield performance of the selected planting material. Commercial yield performance of *Hevea* clones in India were published from time to time (Krishnakutty *et al.*, 1982; Krishnakutty and Sreenivasan, 1984; Joseph and Haridasan, 1990). The steady progress in the adoption of modern clones in Indian rubber plantations is evident from their relative shares in the estate and smallholding sectors which increased from 31.3 and 7.1 per cent in 1955-56 to 99.6 and 95.6 per cent respectively in 1996-97 (Rubber Board, 1997). Nevertheless the dominant smallholding sector accounting for 86 per cent of the area under rubber follows

mainly monoclonal planting with RRIM 105, the most prominent planting material (Veeraputhran *et al.*, 1996) compared to the multiclone planting in the estate sector (Joseph and Haridasan, 1991). Large areas under monoclonal plantings are potentially prone to epidemics and other vagaries of nature (Lacey *et al.*, 1997). Anticipating the potential risks in monoclonal planting, the Rubber Board has been recommending multiclone planting since 1991. In this context, information on the commercial yield performance of individual clones will be highly beneficial to growers, researchers and policy makers.

This study aims at evaluating comparatively the commercial yield performance and related aspects of *Hevea* clones in India. The yield data during the first ten years were analysed as the period approximates the productive period of the virgin bark during which abnormal factors (for instance stimulation) do not normally influence the yield profile.