

## ORTET SELECTIONS FROM SMALL HOLDINGS IN KERALA - LONG TERM GROWTH AND YIELD UNDER SMALL SCALE EVALUATION IN KARNATAKA

M.J. Reju, M.A. Nazeer, M. Suryakumar\*, T.R. Chandrasekhar\* and Kavitha K. Mydin

Rubber Research Institute of India, Kottayam-686 009, Kerala, India

\*Hevea Breeding Sub-Station, Kadaba-574 221, Karnataka, India

Received: 17 February 2016 Accepted: 19 July 2016

Reju, M.J., Nazeer, M.A., Suryakumar M., Chandrasekhar, T.R. and Mydin, K K. (2016). Ortet selections from small holdings in Kerala-Long term growth and yield under small scale evaluation in Karnataka. *Rubber Science*, 29(3): 224-237.

Clones derived from selected ortets were tested in a field trial at the experimental farm of the *Hevea* Breeding Sub-Station at Nettana in Dakshina Kannada district of Karnataka. Fifteen clones were planted in the trial. Girth and yield of the clones were recorded. Girth increment during the immature and mature phases, yield of the clones over the first four years, long term yield over 11 years and yield in the BO-1 and BO-2 panels were analyzed to identify the superior clones in the trial. Girth at opening and tappability attained by the clones were also recorded. Clones with superior yield during summer, monsoon and post-monsoon seasons, and those with stability in growth and yield were selected. Drop in the rate of girth increment due to crop harvest and drop in the summer yield were also determined. Highest mean monthly yield was recorded during November. The highest yielding season was post-monsoon. In this trial, seven clones viz. Ayr 2, Pai 17, Pal 15, CES 42, CES 70, Alk 47 and CES 1/2 were identified for their improved attributes over the check clones. High yield and high girth were recorded in Ayr 2 and Pai 17. Alk 47 was identified as a potential timber-latex clone. Five clones were medium yielders with high girth (Pal 15, CES 42, CES 70, Alk 47 and CES 1/2). These clones were found superior to RR11 105 in the non-traditional Dakshina Kannada district of Karnataka

**Key words:** Ortet, *Hevea* breeding, Clones, Stability, Growth, Yield

### INTRODUCTION

Success in *Hevea* breeding, as in any other crop plant, depends on the extent of variability in the breeding population. In India, the most important objective of *Hevea* breeding is generation of genetically improved cultivars for the farming community. Both conventional and non-conventional methods are employed in

*Hevea* breeding (Simmonds, 1989; Arokiaraj *et al.*, 1994; 1996; Mydin, 2014). However, almost all the popular clones available to the farming community in the rubber growing countries are developed exclusively through conventional breeding methods. Hybridization involving selected parents, evaluation of poly-cross progenies, half-sibs, and evaluation of exotic clones are