

# PERFORMANCE OF NEW ORTET SELECTIONS OF *HEVEA BRASILIENSIS* IN MEGHALAYA

Umesh Chandra\*, R.P. Singh, M.J. Reju<sup>1</sup>, Kavitha K. Mydin<sup>1</sup> and D. Panda<sup>2</sup>

Rubber Research Institute of India, Regional Research Station, Tura-794 001, Meghalaya, India

<sup>1</sup>Rubber Research Institutes of India, Kottayam-686 009, Kerala, India

<sup>2</sup>Central University of Odisha, Koraput-764 020, Odisha, India

Received: 12 May 2020 Accepted: 27 July 2020

Chandra, U., Singh, R.P., Reju, M.J., Mydin, K.K. and Panda, D. (2020). Performance of new ortet selections of *Hevea brasiliensis* in Meghalaya. *Rubber Science*, 33(2): 198-203.

Eleven ortet selections from the states of Assam, Tripura and Meghalaya were evaluated for growth parameters and juvenile yield in a clonal nursery trial where RRIM 600 was used as a check clone. Observations on growth were recorded one year after planting onwards and continued up to five years of crop growth. Three years after planting, the young plants were subjected to test tapping and continued up to five years. The ortet selection RRST 37 attained the highest girth (30.3 cm) and juvenile yield (71.7 g t<sup>-1</sup> 10t ap<sup>-1</sup>) followed by RRSG 9 (66.0 g t<sup>-1</sup> 10 tap<sup>-1</sup>) and RRSA 121 (57.2 g t<sup>-1</sup> 10 tap<sup>-1</sup>). The check clone RRIM 600 recorded a juvenile yield only of 44.4 g t<sup>-1</sup> 10 tap<sup>-1</sup>. The ortet selection RRST 24 attained the highest girth increment of 24 cm over five years followed by RRST 37 (22 cm) and RRST 39 (21.5 cm) whereas the check clone RRIM 600 recorded a girth increment of 21.2 cm indicating the superior performance of the new ortet selections. There is good prospect for preliminary selection of clones through clonal nursery evaluation of these ortets.

**Key words:** Clonal nursery evaluation, *Hevea brasiliensis*, Ortet selection, Potential clones

## INTRODUCTION

*Hevea brasiliensis* is the most important source of natural rubber (NR) and its cultivation is expanding very fast in the state of Meghalaya compared to other plantation crops in the state. People of this region are now preferring to adopt NR over other crops available in this region, because of the suitability and profitability of the crop. Meghalaya is a non-traditional area characterized by low temperature and high altitude. On account of the gradual increase of the acreage under NR cultivation in

Meghalaya, it has now become necessary to evolve new clones suited for the region.

Breeding of any crop aims at the evolution of the specific clones suitable for the particular region and to fulfill the objectives of the breeding techniques. Though there are several breeding methods in *Hevea viz.* hybridisation, ortet selection, poly-cross breeding, half-sib progeny evaluation, full-sib evaluation, *etc.* their evaluation in field trials are time consuming and very lengthy. The Rubber Research Institute of India is now emphasising on the

Correspondence: Umesh Chandra (Email: chandra111107@gmail.com)

\*Presently with B.N.P.G. College, Rath, Hamirpur, Bundelkhand University, Thansi, Uttar Pradesh