POTENTIAL *HEVEA* CLONES DEVELOPED BY ORTET SELECTION IN ASSAM

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A clonal nursery evaluation was conducted with seven superior ortets selected from a population of 340 seedling trees grown under the agro climatic conditions of Assam in order to evaluate their performance when cloned in comparison to the performance of the original mother tree and a popular check clone. Girth at 5th year of planting and girth increment of the ortet clones, RRSG 9 and RRSG 4 in nursery trial and the corresponding mother trees were significantly higher than that of the check clone RRIM 600. Mean juvenile yield of RRSG 9 with or without stimulation using 2.5 per cent ethephon and the mean yield over 11 years of tapping (mature yield) of the mother tree were significantly higher than that of the check clone. Mean juvenile yield of RRSG 8 without ethephon in nursery trial was significantly higher than RRIM 600 but it was not so in case of mother tree. Juvenile yield of RRSG 8 with 2.5 per cent ethephon was at par with the check clone in the clonal nursery. The performance of RRSG 1 was also noticeable with good pre-monsoon yield. The ortets in the present study maintained the character of their mother tree under bud-grafted condition also, as evidenced by the positive correlation between yield of mother trees and their ortet clones. Clones RRSG 9 and RRSG 8 along with RRSG 1 proved promising for further evaluation in large scale trial.

Keywords: Agroclimate , Mother tree, Nursery trial, Ortet, Yield performance

INTRODUCTION

Selection of offspring following cross pollination is practised in tree breeding programme for exploring chances of identifying the transmitted elite characters in the progeny under the native climatic condition. Polycross seeds developed under native climate is exposed to daily weather conflicts resulting in progeny with adaptive potential (Mydin, 2014). Cross pollination is reported to be advantageous due to production of superior as well as locally adapted progeny (Lloyd and Schoen, 1992). Such ortets which are the products of open pollination selected in a country would be important because they are locally adapted (Jacob *et al*., 2013). Thus, from a lot of seeds procured from Prang Bazar Isolated Garden (PBIG), Malaysia, twenty two promising clones were developed in India (Mydin *et al*., 2005; John *et al*., 2013). Rubber is predominantly a cross pollinated perennial tree, therefore, probability of getting superior polycross progeny is considerable. Thus, a trial was initiated in 1987 with 340 seedling plants to evaluate their potential under the agroclimate of Kamrup, Assam.

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