EARLY YIELD PREDICTION IN CLONES FROM DIVERSE LOCATIONS IN A CLONAL NURSERY IN THE TRADITIONAL REGION

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A clonal nursery evaluation incorporating 20 clones including five hybrids and 15 ortets selected from diverse locations was laid out in Central Kerala region along with three check clones *viz.* RRII 105, RRII 414 and RRII 430. The selections were from Kanyakumari (traditional region), Guwahati (non-traditional region) and Wayanad (a high altitude region within the traditional belt). The hybrids from Kanyakumari performed better than the ortets from the region. Par 18 was the best performer with the highest test tap yield of 17 g t^{-1} t^{-1} and highest girth of 45.8 cm in the 6th year of planting. Three other hybrids from the region Par 10, Par 9 and Par 11 also showed high test tap yield comparable to RRII 414 and RRII 430, among which Par 10 recorded superior secondary traits in terms of girth and latex vessel rows (LVR). Two ortets from Guwahati *viz.* RRSG 9 and RRSG 4 performed significantly superior to RRII 105 and on par with the modern check clones for growth and test tap yield. One ortet from Wayanad (P 270) recorded test tap yield on par with RRII 105 and exhibited high growth vigour and LVR distribution comparable to RRII 414 and RRII 430. Six clones were identified for further evaluation based on test tap yield, girth and bark characters. RRSG 9 showed good response to stimulation. The performance of specifically adapted clones under ideal climatic conditions is discussed in the light of early selection in *Hevea* breeding.

Key words: Clones, Clonal nursery, Early selection, *Hevea brasiliensis*, Hybrids, Ortets

INTRODUCTION

Breeding cycle in *Hevea* involves long multiple evaluation stages spanning class to three decades. Clones are added to the pipeline every year through small scale evaluation following hybridisation and ortet (plus tree) selection. The three phase field testing from small scale to large scale and onfarm trials is no longer feasible due to the diversified breeding objectives in the current scenario (Mydin, 2014). Lack of fool-proof early selection parameters is yet another disadvantage. Molecular interventions to reduce the period of field testing remain a

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