

PERFORMANCE OF CERTAIN EXOTIC AND INDIGENOUS CLONES OF *HEVEA BRASILIENSIS*

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A large scale trial, which is the second stage of clone evaluation in *Hevea*, was laid out at Central Experiment Station of Rubber Research Institute of India during 1994. Twelve clones consisting of three exotic hybrid clones introduced from Malaysia in 1993 and three indigenous hybrid clones and four ortets developed by RRII were evaluated along with RRII 105 and RRIM 600 as controls. Among the 12 clones, indigenous hybrid clone 86/44 recorded the highest yield of 67.17 g t⁻¹t⁻¹ in the BO-1 panel over six years of tapping. The yield performance of introduced clone RRIM 712 (59.87 g t⁻¹t⁻¹) and hybrid clone 86/120 (54.68 g t⁻¹t⁻¹) were on par with that of RRII 105 (54.0 g t⁻¹t⁻¹). The highest summer yield was recorded in 86/120 (38.31 g t⁻¹t⁻¹) which was significantly superior to that of RRII 105 (29.64 g t⁻¹t⁻¹).

Indigenous hybrid clone 86/120 showed significantly better girth over both the controls with a mean girth of 60.93 cm and maximum tappareability of 88.63 per cent. 86/44 recorded 75 per cent tappareability as against 70 per cent recorded for RRII 105. Incidence of wind damage and tapping panel dryness was comparatively low in the clone 86/44. 86/120 exhibited less incidence of pink disease. RRIM 712 was not affected by any forms of wind damage. The present investigation shows the superior performance of the hybrid clone 86/44.

Keywords: Clone evaluation, Growth and yield, Introduced clones, Large-scale trial

INTRODUCTION

Ortet selection and hybridization are the most important breeding methods adopted for crop improvement programme in *Hevea* which aims at improving latex yield and growth vigor. Ortet selection has resulted in the release of a number of primary clones from Malaysia, Indonesia, Sri Lanka and India. Such primary clones have helped to achieve significant improvement in yield in the early years of rubber cultivation in the South East Asian countries (Khoo *et al.*, 1982). In hybridization, the heterogeneous seedling

populations produced by hybridization programme are evaluated in the nursery, following which selected hybrids are cloned and evaluated in a phased manner in small scale trials, large scale trials and on-farm trials (Tan, 1987; Varghese and Mydin, 2000).

The Rubber Research Institute of India initiated conventional tree improvement programmes in 1954, for which the techniques adopted have been ortet selection and hybridization (Nair and Panikkar, 1966; Nazeer *et al.*, 1986; Saraswathyamma *et al.*, 1992; Licy *et al.*, 2003; Mydin and Mercykutty, 2007). Popular clones