CLONAL VARIABILITY AND SEASONAL CONTRIBUTION TO YIELD OF *HEVEA* CLONES IN THE TRADITIONAL RUBBER GROWING REGION OF INDIA

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Hybrid clones evolved from specific cross combinations were evaluated in a small scale trial in the traditional rubber growing region of Kerala. Girth attained by the hybrid clones in the early immature period, girth at the opening of the trial and girth during tapping were analysed. Hybrids such as 94/23, 94/44, 94/50, 94/90 were high girthing clones. Yield of clones in the BO-1 panel, BO-2 panel and the overall yield over nine years of tapping were estimated. The highest yield was recorded in 94/50 (69.8 g t^{-1} t^{-1}) followed by 94/23 and 94/44 (69.1 g t^{-1} t^{-1} each) and 94/101 (64.1 g t^{-1} t^{-1}). Three of these hybrids also showed high girth at opening (94/23, 94/44, 94/50). Girth at opening exhibited significant positive correlation with yield in different panels and with yield over nine years whereas the early immature girth did not show significant correlation with the later yield of the clones. Four clones *viz*. 94/50, 94/23, 94/44 and 94/101 were selected for their yield performance. Two of the high yielding clones (94/44 and 94/50) were evolved from the family RRIM 600 x RRIC 52 meanwhile the highest girthing clone (94/23) was from the family RRII 105 x PB 86, and this clone was also one of the clones selected for yield. Distinct seasonal yield difference was recorded. February to May stood for the lean yield season and June to January represented the peak yield season. August to October could sustain the longest period of higher yields at the rate of 60.0 g t^{-1} t^{-1}. July to December was the season with the highest production potential. High variability and heritability was recorded for yield, whereas, low variability and moderate to high heritability was recorded for girth. Hybrid clones 94/23, 94/44, 94/50 and 94/101 are potential clones for further evaluations.

Key words: Girth, Hybrid clones, Heritability, Seasonal yield, Yield variability, Yield

INTRODUCTION

The Rubber Research Institute of India has undertaken crop improvement programmes to generate superior hybrid clones of *Hevea brasiliensis* for commercial cultivation in a systematic manner. Rubber clones with high production potential is very important to the rubber farming community. Many reports have already been published from different parts of the country on crop improvement of *Hevea* clones through hybridization and evaluation (Nazeer *et al*., 1991; Saraswathyamma and George, 1992; Priyadarshan *et al*., 1998; Mondal *et al*., 1999; Reju *et al*., 2004; 2012; Mydin *et al*., 2005; 2011; Mydin, 2014).

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