ON-STATION PERFORMANCE OF NEW *HEVEA* CLONES IN THE PIPELINE IN PHASE 1 PARTICIPATORY TRIAL IN INDIA

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Thirteen new *Hevea* clones along with three check clones *viz*. RRII 105, RRII 414 and RRII 430 were evaluated over a period of 12 years for growth, early yield, disease incidence and other desirable secondary traits in a large scale station trial as part of Participatory Clone Evaluation (PCE) programme (Phase 1) in Central Kerala, India. Among these, five clones *viz*., P 44, P 26, P 63, P 64 and P 70 were found to hold promise in terms of growth, dry rubber yield in the early phase and desirable component traits including disease tolerance compared to control clones. Clones developed through recombination and polycross breeding approaches performed equally well. The high leaf retention in P 63 and P 70 even under the combined attack of abnormal leaf fall and circular leaf spot disease was noteworthy. The performance of new cohort of clones in this central researcher trial will be compared with that of the satellite on farm trials to identify better region-wise adaptive clones for the future.

Keywords: Bark anatomy, Growth, New *Hevea* clones, Participatory clone evaluation, Yield

INTRODUCTION

Classical breeding strategies in any crop species are primarily oriented towards improving the economic yield and rubber (*Hevea brasiliensis* Muell. Arg.) is no exception. Challenges faced by *Hevea* breeders in India today are diverse compared to the 'golden era' of the popular clone RRII 105 in the 1980s and 1990s. Development and release of five clones of the RRII 400 series *viz*., RRII 414, RRII 417, RRII 422, RRII 429 and RRII 430 in the new millennium have brought in more choice of planting materials to the farmers by way of high yield, vigorous growth and better tolerance to biotic and abiotic stresses (Licy *et al*., 2003; Mydin *et al*., 2011, Joseph *et al*., 2016; Meenakumari *et al*., 2015b; 2018). The relatively specific adaptation of these clones, except RRII 430, warranted location specific clone advisory (Mydin *et al*., 2017).

In the pursuit of developing more promising clones with high yield potential and desirable secondary traits, clones developed through hybridisation, polycross breeding, ortet selection *etc*. were subjected to stringent selection in the small scale trial (SST) against the then check clone RRII 105 (John and Mydin, 2018; Reju *et al*., 2019; Mydin 2019; Mydin and John, 2019). More than 300 such primary selections were added

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