

# PERFORMANCE OF NEW *HEVEA* CLONES IN THE PIPELINE FROM A LARGE SCALE TRIAL IN CENTRAL KERALA

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The study was undertaken with the objective of evaluating performance of 12 new *Hevea* clones in the pipeline in the central large scale trial under Phase 1 of the Participatory Clone Evaluation programme in the traditional rubber growing area in India. Growth of two pipeline clones P 21 and P 61 was comparable with that of the most vigorous clone RRII 414 at the time of opening (51.4, 49.1 and 51.9 cm respectively). P 61 also showed very high girth increment rate on tapping (3.6 cm yr<sup>-1</sup>), and was superior to all three checks (2.3 - 2.5 cm yr<sup>-1</sup>) for this trait. In terms of average yield over four years, clone P 21 with 64.8 g t<sup>-1</sup> t<sup>-1</sup> was superior to all other clones including the three check clones (46.0 – 50.7 g t<sup>-1</sup> t<sup>-1</sup>), while clones P 67 and P 74 (59.0 and 51.2 g t<sup>-1</sup> t<sup>-1</sup> respectively) were on par with the controls. P 21 recorded the least incidence of ALF and Colletotrichum diseases, while P 74 showed very low incidence of pink disease. P 74 was on par with RRII 430 and RRII 414 for bark structural features *viz.* thickness and number of latex vessel rows. Performance of promising clones will be continued to be evaluated and compared with that of the satellite on farm trials.

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

## INTRODUCTION

The long breeding cycle coupled with long gestation period has been the major constraint for development and release of *Hevea* clones world over. Genetic improvement through different approaches like recombination/ polycross breeding or ortet/ half sib selections followed by further testing in station trials in small and large plots has its own significance in eliminating the inferior ones in the former and identifying the promising ones in the latter. Only these selections qualify for testing in the final evaluation in farmer's field for the

identification of a promising clone for release. Planting materials of promising clones (developed through various methods) from the primary trials have been maintained in the budwood nurseries established in the Central Experiment Station, Chethackal, in Central Kerala for further evaluation in a participatory manner with a central large scale trial in RRII and satellite on farm trials in large estates. In the meantime, the RRII has also shortened the testing phase considerably by introducing close spaced clonal nurseries in place of small scale trials (Mydin *et al.*, 2004;