

# LONG TERM PERFORMANCE OF NEW GENERATION *HEVEA* CLONES INTRODUCED TO SUB-HIMALAYAN WEST BENGAL

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Ten hybrid clones, including five new generation clones of RR II 400 series were evaluated in a large scale trial in the Dooars area of Sub-Himalayan West Bengal over a period of 24 years. Overall performance in terms of growth during 23 years after planting and dry rubber yield over 16 years of tapping was assessed. RR II 176 recorded the highest girth (84.1 cm) and biomass (591 kg tree<sup>-1</sup>). RR II 429 and RR II 203 were the second best clones with a girth of more than 80 cm indicating the growth adaptability of these three clones under the cold stress conditions of Northern West Bengal. Highly significant clonal variation was observed for dry rubber yield. RR II 429 was the highest yielder during the entire tapping duration of 16 years with a mean yield of 61.1 g t<sup>-1</sup> t<sup>-1</sup> followed by RR II 417 (54.2 g t<sup>-1</sup> t<sup>-1</sup>) and the yields of these two clones were significantly superior to the check clone RR IM 600 (40.5 g t<sup>-1</sup> t<sup>-1</sup>). The pre-winter yield of these two clones was 123.8 g t<sup>-1</sup> t<sup>-1</sup> and 110.1 g t<sup>-1</sup> t<sup>-1</sup>, respectively. RR II 422 and RR II 430 were the other two clones with annual yield more than 50 g t<sup>-1</sup> t<sup>-1</sup> and comparable to RR IM 600. RR II 414 showed the lowest yield in the trial. RR II 429 which recorded high tree stand, sustainable growth and 50 per cent yield improvement over RR IM 600 under the prevailing chilling stress conditions is the best suited clone for the region.

**Key words:** Cold stress, Growth adaptability, *Hevea* clones, Sub-Himalayan West Bengal

## INTRODUCTION

Rubber cultivation in India commenced on a commercial basis in the Southern most peninsular state of Kerala. But due to land scarcity, cultivation has been extended to suboptimal/marginal areas where agro-climatic suitability is partial. North East India is the second largest in area under rubber after the traditional tract. RR IM 600 was the only widely recommended clone for the region. Recently RR II 208 is also

recommended along with RR IM 600. Seeing the appreciable suitability for rubber cultivation in the region, experimentation was extended to parts of Sub-Himalayan West Bengal and a few promising clones could be identified (Das *et al.*, 2010; 2011). A large scale evaluation of 10 clones including five from the modern RR II 400 series, laid out as part of multi environment testing, resulted in the upgradation of four RR II 400 series clones in the Category II of the

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