ASSESSMENT OF YIELD AND YIELD STABILITY OF SOME *HEVEA BRASILIENSIS* CLONES UNDER THE HIGH ALTITUDE CONDITIONS OF MEGHALAYA

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Quantum yield and yield stability of eighteen clones of *Hevea brasiliensis* were studied under the high altitude conditions, in two clone evaluation trials comprising of ten clones each, with two clones in common. In one of the trials, low coefficients of variation and high means were observed for RRIM 600 and RRII 203 whereas high coefficients of variation and high means for RRII 105 and PB 235. The highest expected average annual yield was computed for RRIM 600 followed by RRII 105. In the other trial, low coefficients of variation and high means were observed for RRII 209 and PB 311 and high coefficient of variation and high mean for RRII 105 and PB 310. However, the highest expected average annual yield was for PB 311. Successive recordings of average annual yield of clones from both trials have shown an increasing trend suggesting that it would take a few more years for yield stabilization.

Key words: Clones, *Hevea brasiliensis*, High altitude, Meghalaya, Yield, Yield stability.

INTRODUCTION

Hevea brasiliensis is now under extensive cultivation in many parts of northeast India. Though *Hevea* is a new crop in the region, reports are now available on various aspects of the performance of different cultivated clones (Sethuraj *et al.*, 1989; Meenattoor *et al.*, 1991; Vinod *et al.*, 1996, 2000; Priyadarshan *et al.*, 1998, 2002; Mondal *et al.*, 1999; Reju *et al.*, 2000, 2001). Although environmental constraints such as high altitude and low temperature during winter season are prevalent, rubber cultivation has been successful in the region. Tura is one such area (latitude 25° – 26°; longitude 90° – 91°; altitude 600 m above msl) in Meghalaya, where the experiment was conducted. Assessment on stability of yield of *Hevea* clones has not so far been carried out in this region. In the present study, yield performance in terms of quantum stability of some *Hevea* clones were evaluated in two clone trials.

MATERIALS AND METHODS

The clone trials, I and II, were established in 1985 and 1986 respectively with single tree single plot randomized design, at a spacing of 6.6 x 3.3 m and 6 x 3 m respectively. Clone trial I included ten clones namely, RRII 105, RRII 118, RRII 203, RRIM 600, RRIM 605, PB 86, PB 235,

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