

EVALUATION OF YIELD POTENTIAL OF *HEVEA BRASILIENSIS* CLONES OVER TEN YEARS OF TAPPING IN ASSAM

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The yield potential of 18 *Hevea brasiliensis* clones were evaluated over the first ten years of tapping under continuous tapping system (without rest) in Assam, North East India. Secondary attributes like TPD, clear bole volume, wind damage and tolerance to powdery mildew disease of these clones were also evaluated. RRIC 102 showed the highest girth in immature stage, closely followed by RRIC 105, while the lowest girth was observed in Cl 1. RRIC 102 exhibited the highest girth increment after the commencement of tapping and during mature stage. RRIM 600 had the highest yield (33.91 g) over the first ten years of tapping followed by PB 311 (31.08 g). Yield was less for all the eighteen clones during winter months (December to March) characterized by low temperature, combined with wintering and refoliation stresses. High dry rubber content (DRC) of latex was observed in all the clones from May to August, while it was low in December and January. Yield got stabilized by six years of tapping. The projected commercial yield (kg/ha/year) over the first ten years of tapping indicated that RRIM 600 ranked first (2034 kg) followed by PB 311 (1864 kg). The potential yield of RRII 105, (the popular clone in the traditional tract) was only 1680 kg/ha/year in the experimental location.

Key words: Assam, Clones, Growth, *Hevea brasiliensis*, India, Yield, Yield stabilization.

INTRODUCTION

There is a growing demand for natural rubber in India and non-availability of potential land for further expansion of this crop in the traditional rubber growing region of South West India, the cultivation has been extended to the non-traditional areas of North East (NE) India. The north-eastern region has been identified as one of the most potential non-traditional tracts suitable for rubber plantation, the major agro-climatic constraint for growth and productivity of rubber here is the low temperature during winter (December to February) which

affects the growth and increases the gestation period by one or two years as compared to the traditional zone. Therefore, it is necessary to evolve location-specific clones for North East India. Very limited information is available on the effect of agro-climate on growth and yield of rubber (*Hevea brasiliensis*) clones in this region (Sethuraj *et al.*, 1989; Vinod *et al.*, 1996; Mondal *et al.*, 1999). The present study was taken up to evaluate the growth and yield of 18 *H. brasiliensis* clones under the prevailing agro-climatic conditions of Assam in NE India.