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GROWTH AND INITIAL YIELD OF SOME *HEVEA* CLONES IN MEGHALAYA

M.J. Reju, A.P. Thapliyal, H.K. Deka, M.A. Nazeer and T.A. Soman

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A trial composed of ten *Hevea* clones was established at 600 m altitude in 1986 at Tura in Meghalaya, North East India, to evaluate their growth and yield performance. Results showed that maximum growth (44%) and yield (36%) occurred during the monsoon and the post-monsoon seasons respectively. The lowest growth of 5 per cent was noted during the winter season succeeded by 11 per cent in the summer while the lowest yield of 19 per cent was accounted for in the summer followed by 22 per cent in the winter and 23 per cent during monsoon. The growth was vigorous in the clones RRIC 105, PB 311, PB 310 and RRII 118 but low in PR 255, RRII 105 and RRII 5. While the highest yield was recorded in PB 311 followed by RRII 208 and RRII 118 the lowest was recorded for RRIC 105 and RRIC 102. Growth and initial yield performance of the ten clones under the agroclimatic conditions of the region are discussed.

Key words : Growth, *Hevea*, India, Meghalaya, Non-traditional region, Yield

M.J. Reju (for correspondence), A.P. Thapliyal, H.K. Deka, Regional Research Station, RRII, Tura – 794 001, Meghalaya, India; M.A. Nazeer, Rubber Research Institute of India, Kottayam – 686 009, Kerala, India; T.A. Soman, Hevea Breeding Sub-Station, Paraliyar, Kanyakumari – 629 851, Tamil Nadu, India

INTRODUCTION

Rubber (*Hevea brasiliensis*) cultivation has been extended to the non-traditional regions of India to meet the increasing demand and in spite of the adverse climatic conditions the cultivation has been successful in the north eastern states. Normally *Hevea* clones attain maturity by the seventh year of planting in the traditional zone where environmental conditions are favourable. However, in non-traditional areas like Assam, Tripura and Meghalaya, nine to ten years are required for maturity due to adverse atmospheric conditions that prevail in the region during the winter season. Some reports are available on the growth and yield accomplishment of *Hevea* clones in the north eastern regions of India (Sethuraj *et al.*, 1989; Meenattoor *et al.*, 1991; Vinod *et al.*, 1996; Reju *et al.*, 2000). The present experiment was to study the responses of different *Hevea* clones under the prevailing environmental conditions of Meghalaya.

MATERIALS AND METHODS

The experiment was conducted at the Regional Research Farm of Rubber Research Institute of India at Tura, Meghalaya (latitude 25°-26°N, longitude 90-91°E, altitude 600 m above msl). Ten clones of *Hevea brasiliensis* viz. RRII 5, RRII 105, RRII 118, RRII 208, RRIC 102, RRIC 105, PB 260, PB 310, PB 311 and PR 255 were planted in 1986 in single tree single plot completely randomized design with forty replications. The spacing adopted was 6m x 3m. All the clones were opened for tapping during 1997-98 and exploited under $^1/_2$S d/2 system. Data collected during the years 1999 and 2000 were analyzed for the present study. The rubber yield (g/tree/tap) was recorded two times a month by cup coagulation method. Growth in terms of girth increment at 150 cm height was recorded at monthly intervals.

Meteorological data such as maximum and minimum temperature, rainfall, relative