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# FIRST PANEL YIELD OF EIGHT *HEVEA* CLONES IN SUB-TROPICAL MEGHALAYA

Meghalaya is one of the areas in North East India identified for rubber (*Hevea brasiliensis* Willd. ex Adr. de Juss. Muell. Arg.) cultivation. Reports are now available on adequate growth and good yield performance of various clones of *Hevea* from North East India (Meenattoor *et al.*, 1991; Vinod *et al.*, 1996; Priyadarshan *et al.*, 1998; Mondal *et al.*, 1999; Reju *et al.*, 2000) in spite of the environmental constraints. Under regular alternate daily tapping (1/2S d/2) system, rubber trees can be exploited for a minimum of 20 years (Vijayakumar *et al.*, 2000). Comparative yield performance of eight *Hevea* clones on the BO-1 panel is analyzed in this study.

The experiment was carried out at the Regional Research Farm, Tura (25° 31' N; 90° 14' E) in Meghalaya. Yield data for the study were collected from eight clones *viz.*, RRII 105, RRII 118, RRII 203, RRIM 600, RRIM 605, PB 86, PB 235 and GT 1, planted in 1985 in a completely randomized block design with 50 replications. Trees were opened for tapping ten years after planting, on attaining tappable girth and were subjected to 1/2S d/2 system of exploitation. Rubber yield was recorded at fortnightly intervals by cup coagulation method. Clone-wise monthly dry rubber yield over the first five years of tapping was statistically analysed (Table 1). Agrometeorological parameters such as rainfall, relative humidity, maximum and minimum temperature, soil temperature, evaporation, bright sunshine hours and wind velocity were also recorded from the agromet observatory at the plantation site and correlated with the yield.

After five years of tapping, RRIM 600 recorded the highest mean yield (24.1 g/t/t) followed by RRII 105 (21.7 g/t/t) and RRII 118 (21.5 g/t/t). The lowest yield was recorded in RRIM 605 (13.5 g/t/t). During the first year of tapping, the average yield was 14.2 g/t/t and no clone was significantly superior. During the second year, the average yield decreased to 13.3 g/t/t and clonal differences were still not significant. Average yield was found to increase from the third year of tapping with significant clonal differences. Mean yield was 15.1, 21.7 and 29.8 g/t/t during the third, fourth and fifth years of tapping respectively.

Mean monthly yield composition var-

Table 1. **Yield on BO-1 panel (g/t/t)**

| Clone | Year | | | | | Mean |
|---|---|---|---|---|---|---|
| | I | II | III | IV | V | |
| RRII 105 | 15.1 | 14.9 | 19.9 | 29.0 | 29.5 | 21.7 |
| RRII 118 | 15.4 | 16.6 | 18.2 | 26.9 | 30.5 | 21.5 |
| RRII 203 | 11.9 | 11.6 | 18.0 | 20.7 | 33.6 | 19.2 |
| RRIM 600 | 18.2 | 17.6 | 17.8 | 23.1 | 43.8 | 24.1 |
| RRIM 605 | 11.2 | 8.9 | 9.5 | 15.8 | 22.3 | 13.5 |
| PB 86 | 15.5 | 11.7 | 13.4 | 18.6 | 25.2 | 16.9 |
| PB 235 | 16.7 | 16.7 | 11.4 | 16.7 | 32.0 | 18.1 |
| GT 1 | 9.7 | 9.7 | 12.5 | 22.7 | 21.8 | 15.7 |
| Mean | 14.2 | 13.3 | 15.1 | 21.7 | 29.8 | 18.8 |
| SE | 1.0 | 1.0 | 1.4 | 1.7 | 2.5 | 1.2 |
| CD ($P \leq 0.05$) | NS | NS | 6.5 | 7.5 | 10.4 | 4.5 |
| ($P \leq 0.01$) | NS | NS | 8.5 | 9.8 | 13.7 | 5.9 |