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VARIATION AND TREND OF YIELD AND RELATED TRAITS OF *HEVEA BRASILIENSIS* MUELL. ARG. IN TRIPURA

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A study was undertaken to assess the variation and covariation of yield and related traits of ten clones of *Hevea brasiliensis*, during the peak yielding season for two years in Tripura, North East India. Initial flow rate (IF), plugging index (PI), dry rubber content (DRC), total solids content (TSC), inorganic phosphorus (P_i), sucrose content (SC), total volume of latex (TV) and dry rubber yield (RY) exhibited considerable seasonal and clonal variation. The response patterns of different traits varied from linear (IF, DRC, TSC and SC) to non-linear (PI, P_i, TV and RY). The patterns were similar during both the years under study. TV was found to be the major factor contributing to seasonal fluctuations in the dry rubber yield. DRC and TSC were found negatively associated with P_i and SC as observed in stimulated trees. SC was found to be the major determining factor of TV. P_i influenced TV positively through SC, while IF and DRC influenced TV negatively through SC. It appeared that the trees experience some kind of stimulation during the peak yielding season, causing increased laticifer activity and higher sucrose loading resulting in drainage of excess unutilized sucrose through latex serum. The phenomenon also causes prolongation of latex flow. Influence of wintering process and low temperature in determining the yield was evident.

Key words: *Hevea brasiliensis*, Non-traditional region, Path coefficient, Tripura, Yield.

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INTRODUCTION

Latex, the yield from rubber trees (*Hevea brasiliensis*) is produced in specialized cells called laticifers in the bark of the tree. The yield is primarily controlled by factors that influence latex production and latex flow. Genetic, environmental and physiological factors are known to influence these two phases of latex yield (Jacob *et al.*, 1989). The degree of influence of these factors on different components varies,