

EVALUATION OF *HEVEA BRASILIENSIS* CLONES FOR YIELDING TRENDS IN TRIPURA

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A comparison of two yielding regimes of *Hevea brasiliensis* (Regime I – April to September – non-cold season and Regime II – October to January – cold season) with respect to 15 clones of varying yield potential evaluated in Tripura, indicated a congenial environment for yield in the cold season. The clones PB 235, RR11 118, RR11 203, RRIM 600 and RRIM 703 were ranked as high yielders considering the data from BO1 and BO2 panels. Among these, RR11 203 and PB 235 exhibited least depression in yield (18.6 and 31.9% respectively) during Regime I. In general, dry rubber yield showed negative relationship with minimum temperature, wind velocity and evaporation. However, PB 235 lacked any such relationship when considered individually, indicating thereby that it is less sensitive to yield stimulation towards the onset of cold season. The mean dry rubber yields (g/tree/tap) of PB 235 and RRIM 600 were regressed against environmental mean under the two regimes. Accordingly, 28 g/tree/tap) was identified as the threshold yield under stress. In terms of yield per cm of tapping cut, PB 235, RRIM 703, RR11 203 and RR11 118 were found to be potential yielders. Covariance analysis categorised RR11 5, RRIM 703, PB 5/51 and PB 235 to be consistent over the regimes. Considering the attributes mean yield, per cent depression during Regime I, yield per unit length of tapping cut and consistency in yield over regimes, clones selected for commercial evaluation are PB 235, RR11 203, RR11 118 and RRIM 703 with RRIM 600 as check.

Key words : Consistency, Non-traditional environment, Stress factors, Yield depression, Yield regimes.

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INTRODUCTION

Macro-environmental attributes like temperature, rainfall, wind velocity, vapour pressure, sunshine hours, evaporation, relative humidity, soil moisture, soil fertility and pH, which are largely non-static but predictable, influence adaptation of genotypes. Predictable and non-predictable

environments determine the phenotypic changes in a given genotype. While the different climatic and edaphic factors constitute the predictable (macro) environment, the changes in developmental pathways contribute largely to the unpredictable (micro) environment (Wu, 1997). In rubber,