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# EVALUATION OF *HEVEA* GERMPLASM : 1. VARIABILITY IN EARLY GROWTH PHASE

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One hundred genotypes from the wild germplasm of *Hevea brasiliensis* were subjected to a preliminary study on variation. Observations on girth, height, leaf area, bark thickness, juvenile yield, total number of latex vessel rings and density of latex vessels per ring were made. General mean values of the wild germplasm for all the characters except for height, single leaf area and density of latex vessels per ring were found to be lower than that for the controls. MT 999 showed a higher value for total number of latex vessel rings and density of latex vessels per ring. Juvenile yield of the wild germplasm was very low compared to that of the controls. Among the three provenances - Acre, Rondonia and Matto Grosso, the genotypes from Matto Grosso showed a general superiority for all the characters except girth, height and leaf area. Yield, leaf area and total number of latex vessel rings gave higher estimates of GCV, $H^2$ and GA.

Key words : *Hevea brasiliensis*, Germplasm, Provenance, IRRDB collection, Variability, Heritability.

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## INTRODUCTION

The *Hevea* seeds that could effectively be introduced from Brazil into the eastern hemisphere by Wickham in 1876 were only a few and had been collected from a limited area near the confluence of the rivers Tapajoz and Amazon. Compared to the large spread of the species in its natural habitat, the collection from this minuscule area represents only a very small gene pool (Schultes, 1977). Intensive directional selection over the years for yield alone has further narrowed the genetic base.

All these have necessitated the exploration of the primary centre of origin of the crop, the Amazon forests, for collection and conservation of the high variability. The expedition organised by the International Rubber Research and Development Board in 1981, covered a wide range of agroclimatic areas in three states (Acre, Rondonia and Matto Grosso) in Brazil. The exploration netted a total of 64723 seeds and 1522 m of budwood (International Rubber Research and Development Board, 1982) collected from 194 exceptionally good trees. These genotypes were distributed to IRRDB member countries and those received in India