

PERFORMANCE OF CERTAIN WILD *HEVEA* ACCESSIONS IN THE EARLY PHASE OF FURTHER EVALUATION

C.P. Reghu, Saji T. Abraham, Ramesh B. Nair and Y. Annamma Varghese
Rubber Research Institute of India, Kottayam – 686 009, Kerala, India.

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In a second phase evaluation of 80 selected wild accessions of *Hevea brasiliensis* in the 1981 IRRDB Brazilian germplasm collection established at the Rubber Research Institute of India, girth, bark thickness, total number of latex vessel rows, density of laticifers and test tap yield at the age of four years were studied. RRII 105, a popular clone, was used as control. The accessions showed statistically significant differences for all the five traits in the early growth phase. In general, the wild accessions were poor yielders except for one from Mato Grosso, MT/IT/15 – 28/207, with yield (9.72 g/t/t), comparable to RRII 105 (9.40 g/t/t). Certain accessions showed early girthing and longer boles with high but few branches, which are indications of timber production potential. The accessions from Mato Grosso, in general, continued to be superior in the early phase of further evaluation also. Among the top 25 per cent of the wild accessions ranked using rank sum method based on the pooled performance for all the five characters, 20 per cent were from Mato Grosso. Most of the accessions identified earlier as superior for yield and other secondary characters were ranked high.

Key words: Bark anatomy, Brazilian germplasm, *Hevea brasiliensis*, Rank sum evaluation.

INTRODUCTION

The wild germplasm of *Hevea brasiliensis* is the basic raw material for the current crop improvement programme to meet the future demands of the NR industry. Considering the urgent need for broadening the narrow genetic base of *Hevea*, the International Rubber Research and Development Board (IRRDB) made considerable efforts in building up fresh germplasm collection representing the centre of diversity in Brazil during 1981 (Allen, 1984). Characterization and preliminary evaluation are the basic needs for utilization of the superior wild accessions from this collection. Two hundred wild accessions grown in an *ex situ*

conservatory representing accessions from Acre, Rondonia and Mato Grosso provinces were subjected to preliminary evaluation of which 80 promising ones were identified based on their superior performance for individual traits. The present paper reports the results of the second stage evaluation of these accessions on the basis of some morphological and bark structural characters observed at the age of four years. An attempt to assess the performance of these accessions in the early growth phase has also been made.

MATERIALS AND METHODS

The material consisted of 80 wild accessions selected on the basis of a preliminary evaluation. These included 22, 20 and