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FURTHER EVALUATION AND SELECTION OF 1981 IRRDB WILD *HEVEA* GERMPLASM COLLECTION IN INDIA

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A mature phase evaluation of selected wild accessions of *Hevea brasiliensis* from the 1981 IRRDB Brazilian wild germplasm collection established at the Rubber Research Institute of India was done on the basis of various agro-morphological traits such as growth, yield, bark anatomical characters and timber potential. These wild accessions represent three provenances of Brazil, *viz.* Acre, Rondonia, and Mato Grosso. Field experiments were conducted at the Regional Research Station of Rubber Research Institute of India at Padiyoor, in Northern Kerala. The popular clone, RRII 105 was used as control.

The accessions showed significant variability for all the characters. In the year of opening, six out of eighty accessions were found superior to RRII 105 for girth and this trend continued for the subsequent five years under regular tapping. The accession MT 2233 was significantly superior to RRII 105 in bark thickness. Two Acre accessions (AC 635 and AC 166) had significantly higher number of latex vessel rows than that of RRII 105 and the number of latex vessel rows was on par with the control in 44 accessions. One Rondonian accession (RO 368) showed significant superiority for density of laticifers over RRII 105 and 11 accessions comprising two from Acre and nine from Mato Grosso provenances were on par with that of the check clone. Thirty three accessions had latex vessel diameter on par with that of RRII 105, indicating the scope for selection in the wild accessions for yield-related anatomical traits. Increased number of laticifer rows found in an accession might have contributed its high yield potential.

Six accessions had significantly higher bole volume than that of RRII 105. Among these, two accessions with low dry rubber yield can be considered as potential timber yielding accessions and the remaining four accessions with high timber yield and comparatively medium latex yield can be considered for developing timber-latex clones. The wild accession AC 166, gave good yield and this was reconfirmed in further on-farm evaluation. The possibility of using the inherent genetic variability available in this wild population for future crop improvement programmes is discussed.

Keywords: Bark anatomy, Brazilian germplasm, Dry rubber yield, *Hevea brasiliensis*, Timber yield, Wild accession

INTRODUCTION

Considering the need for broadening the existing narrow genetic base of natural rubber, *Hevea brasiliensis*, a joint effort in building up of fresh germplasm collection representing the centre of diversity in Brazil

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