

GENETIC DIVERSITY OF SELECTED GENOTYPES FROM YEAR 2008 HAND POLLINATION PROGENY OF *HEVEA BRASILIENSIS* USING SSR MARKERS

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Hevea brasiliensis (Willd. ex Adr. de Jus.) Muell. -Arg., is the major producer of natural rubber, which is an important industrial raw material. Genetic base of cultivated rubber is heavily constricted due to its origin from the narrowed Wickham's genetic base as well as prolonged directional selection. This situation has resulted in low yield increment and risk of sudden pest outbreaks in currently developed clones. Therefore, it is important to raise genetically diverse clones for rubber cultivation. With this aim, "Year 2008 Hand Pollination progeny" was raised by crossing genetically diverse male parents with three different female parents. Twenty three *Hevea* genotypes were selected from this progeny based on yield, girth of stem and disease tolerance. The selected genotypes were subjected to analysis for genetic diversity with their three female parents. Eight *Hevea* SSR markers were used for this study. Amplified PCR products were electrophoresed and visualized under UV transilluminator. All these genotypes and female parents produced two distinguishable alleles which were detected for each of the SSR loci. Power Marker software (version 3.25) was used for data analysis. Three female clones i.e. RRIC 100, RRIC 121 and PB 28-59 were grouped together showing their close genetic relatedness probably due to their parents being from the Wickham genetic base. Sixteen genotypes deviated from the female parents. Out of 16, nine showed more than 0.5 genetic distances indicating a greater genetic diversity, being non Wickham male parents. Accordingly, genetically diverse clones from "The 2008 Hand Pollination progeny" can be added to rubber cultivation to widen and improve its existing narrow gene pool in future.