PERFORMANCES OF PROMISING AMAZONIAN GENOTYPES FROM HEVEA GERMLASM IN VIETNAM
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Summary
The germplasm evaluation trial SGLK 03 at Lai Hung Experimental Station, Binh Duong province, which includes 190 Amazonian genotypes. After seven years of tapping, eight promising genotypes have been selected. Three genotypes namely AC 37/345, RO 23/33C and RO 22/661 were identified as the best most vigorous genotypes with the girth of 86.8 - 97.1 cm, corresponding to 15.3 - 28.8% higher than that of the control clone PB 235 and estimated bole wood volumes were 0.33 - 0.63 m$^3$/tree, corresponding to 13.7 - 115.8% higher than that of the control clone PB 235. These genotypes were light infection to powdery mildew and pink diseases; two genotypes namely RO 22/61C and AC 35/737 were identified as the best genotypes with the mean latex yield of 7 tapping years of 63.2 g/t and 36.9 g/t, respectively, corresponding to 106.4% and 62.1% of the control clone PB 235. Three genotypes namely MT 7/45C, AC 43/4C and AC 56/87C which were identified as the best genotypes with the latex sucrose content of 16.64 - 23.66 mM, corresponding to 492.1 - 741.4% higher than that of the control clone PB 235 and outperforming the studied population. These genotypes are likely to be used directly recommendation as latex - timber clones or new source of parental materials that creates hybridization with the crosses between Wickham x Amazon genetic bases. The most noticeable is the genotype RO 22 /61C that performed good growth, high latex yield, high sucrose content in latex. In addition, this genotype also exhibits resistance to diseases such as powdery mildew, pink diseases and corynespora being the most promising Amazonian genotype could be recommended directly for the industry. By using ISSR markers, the studied Amazonian genotypes exhibited high genetic diversity with the Nei’s genetic distance coefficient among the genotypes ranging from 0.142 to 0.884. In addition to the results on evaluation of agronomic traits, results on genetic distance and cluster analyses of the selected Amazonian genotypes and Wickham clones have provided the valuable data and background for selecting parental genotypes and designing crosses towards increasing genetic variability and improving important agronomic traits of progenies in the further Hevea breeding programs.

Keywords: Rubber gene sources IRRDB’81, bole wood volumes, latex yeild, latex sucrose content, genetic diversity of Amazon genetic rubber gene.