



Amplified fragment length polymorphism analysis of grapevine rootstock genotypes in Turkey

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ABSTRACT. Amplified fragment length polymorphism (AFLP) technique was used to assess genetic relationships among 20 grapevine rootstocks in Turkey. Discrimination of the rootstocks with 10 primer combinations yielded 1366 bands on AFLP gels; 65% of them were polymorphic. The rootstocks revealed two main clusters; one of them comprised two (Malégue and Harmony) and the other 18 genotypes. The *Ber x Rip* hybrids Cosmo 2 and Cosmo 10 formed a group with a high internal similarity ratio (0.909); they also formed a group with other *Ber x Rip* hybrids, 5C, 8B, SO4, and 420A Mgt, with a similarity ratio higher than 0.690 (subcluster II). Rootstock 5BB was placed in another subcluster (subcluster III). Among five *Ber x Rup* rootstocks, 110R-99R (0.853) and 1103P-140Ru (0.837), which were located in different subclusters, formed a dual group, as expected. Rootstock 779P, which had almost 0.800 similarity with the dual group of 110R-99R, formed another group. The 44-53 Malégue and Harmony rootstocks formed a group with the lowest similarity ratio (0.668) (subcluster I) and 41B-Fercal formed another dual group with a high similarity ratio (0.813). The

distinction capacity of single- and double-*EcoRI-MseI* primers was evaluated; primers AC/CTA, TC/CAC, AG/CTC, and AG/CAG discriminated the 20 rootstocks, with a similarity value below 0.910. The best primers for discrimination of rootstock varieties were AG/CAG and AG/CTC, while the primers TC/CAC and AC/CTA could also be useful for clonal discrimination of genotypes.

Key words: AFLP; Molecular analysis; Grapevine rootstock