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Comparison of Sea Buckthorn Genotypes (Hippophae rhamnoides L.) Based on RAPD and FAME Data

Sezai ERCİŞLİ[1], Emine ORHAN[1], Nalan YILDIRIM[2], Güleray AĞAR[2]
[1]Atatürk University, Faculty of Agriculture, Department of Horticulture, 25240 Erzurum - TURKEY
[2]Atatürk University, Faculty of Arts and Science, Department of Biology, 25240 Erzurum - TURKEY

Abstract: FAME and RAPD profiles were used to examine biochemical and genetic relationships between 10 selected sea buckthorn genotypes found in the same area of Eastern Anatolia. Fatty acid composition of sea buckthorn berries was determined using gas chromatography. Fatty acid results showed that there were differences between genotypes in both the percent and presence of fatty acids in the berries. Myristic acid was detected only in berries of the ESB8 and ESB9 genotypes. Nervonic acid was detected only in the ESB5 genotype and linoleic acid was detected only in the ESB4 genotype. RAPD data also showed that the ESB4 genotype was in a group distinct from the others. According to these results, it can be concluded that both the absence of linoleic acid and the use of RAPD data could be useful indicators for the characterization and grouping of sea buckthorn genotypes.

Key Words: Biochemical and molecular markers, fatty acids, Hippophae rhamnoides, RAPD

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