

عنوان مقاله:

Genetic diversity of Iranian melon cultigens revealed by AFLP markers

محل انتشار:

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خلاصه مقاله:

Iran is a part of the secondary centre of origin of melons, and therefore, there is a wealth of genetic variation of these species in this country. The Amplified Fragment Length Polymorphism (AFLP) marker was applied to investigate the genetic variations among five major Iranian melon cultigens (*Cucumis melo*) and „Ananasi“ as a general well-known cultivar. Ten primer pairs were used on 90 individuals producing 318 polymorphic fragments, with an average of 31.8 fragments per primer combination. The polymorphism rates ranged from 80 to 100%. The genetic similarities among accessions were calculated according to Dice's Similarity Index and used to construct a dendrogram based on the Unweighted Pair Group Method with Arithmetic Average (UPGMA). The genetic distance estimates based on AFLPs ranged from 0.29 to 0.63, with a mean of 47 ± 0.3 . Iranian melon genotypes and the „Ananasi“ cultivar were considered as two separate groups on the cluster analysis. The principal coordinate analysis showed a separate allocation of the melon cultivar groups. The results demonstrated a wide diversity of Iranian melon cultigens. The high number of alleles and the high expected genetic diversity detected with the AFLP marker indicated that the Iranian melon cultigens had distinctive characteristics and were an important genetic diversity pool, which made them a valuable source of breeding materials

کلمات کلیدی:

Amplified fragment length polymorphis, *cucumis melo*, genetic distance, molecular markers

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