

عنوان مقاله:

Genetic diversity of Iranian purslane (*Portulaca oleracea* L.) accessions by using ISSR markers

محل انتشار:

سومین کنفرانس بین المللی توسعه پایدار، راهکارها و چالش ها با محوریت کشاورزی، منابع طبیعی، محیط زیست و گردشگری (سال: 1395)

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نویسندگان:

Iman khalili baseri - *Mohaghegh Ardabili University, Department of Biotechnology and Molecular genetics, Iran*

Meysam Madadi - *Huazhong Agricultural University, College of Plant Science and Technology, Wuhan, China*

Mehdi Mohebodini

Mehdi Behnamian

خلاصه مقاله:

Diversity analysis at the molecular level using PCR-based markers is the efficient and rapid method of identifying the relationships and differences among the genotypes. In the present study, genetic diversity and relationships among 20 collected purslane accessions were evaluated using ISSR markers. The genotyping data were used to understand the relationships among the collected accessions and identify genetically diverse purslane accessions. Twenty-five primers gave a total of 92 bands, among which 62 were polymorphic (67.4%). Genetic diversity as estimated by Shannon's information index was 0.55, revealing a quite high level of genetic diversity in the germplasm. Average number of observed allele, effective allele, polymorphic information content (PIC) and Nei's index were 2, 1.65, 0.37, and 0.37, respectively. Cluster analysis based on similarity coefficient using Unweight Pair Group Method with Arithmetic mean (UPGMA) indicated wide range of diversity across the studied accessions. From this dendrogram, the 20 purslane accessions were grouped into seven major clusters at a coefficient of 0.7. We suggest that based on the constructed dendrogram using ISSR markers those accessions that are far from each other by virtue of genetic origin and diversity index are strongly recommended to select as parent for future breeding program to develop high yielding and stress tolerant purslane variety in contribution to global food security.

کلمات کلیدی:

Purslane (*Portulaca oleracea* L.), Genetic diversity, ISSR

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