

عنوان مقاله:

Study of Genetic Diversity Among Crataegus Species (Hawthorn) Using ISSR Markers in Northwestern of Iran

محل انتشار:

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خلاصه مقاله:

Background: Crataegus spp. (Hawthorn) are used for horticultural and medicinal purposes. Objectives: In the present study, the genetic relationships among the five Iranian Crataegus species were evaluated by Inter Simple Sequence Repeats (ISSR) molecular marker. Methods: PCR reactions were performed using six primers (۸۱۱, ۸۲۷, ۸۳۴, ۸۴۵, ۸۵۶, and ۸۶۸) and genetic similarity was calculated based on Jacquard's similarity coefficient. Results: Six primers generated ۷۹ products in total, of which ۷۱ were polymorphic (۸۹.۹%), with an average of ۱۳.۱ bands per primer. The percentage of polymorphic bands ranged from ۷۷ to ۱۰۰. Primer ۸۵۶ produced the highest number of bands, while the lowest was generated by primer ۸۴۵. The Jacquard's similarity coefficient, derived from ISSR marker analysis, ranged from ۰.۱۶۴ to ۰.۳۳۷, indicating high genetic variation among Crataegus species in Iran. Conclusion: This study provides important data for identifying species relationships and helps develop plant breeding strategies to improve the medicinal properties of this genus in the future.

کلمات کلیدی:

Genetic variation, Hawthorn, Medicinal plants, Pharmaceutical activity, Polymorphism

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