

عنوان مقاله:

Assessment of Melon Genetic Diversity Based on Fruit Phenotypic Traits and Flowering Habits

محل انتشار:

مجله بین المللی علوم و فنون باغبانی، دوره 9، شماره 1 (سال: 1401)

تعداد صفحات اصل مقاله: 20

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خلاصه مقاله:

Understanding genetic diversity and germplasm classification are the keys for selection of right parents for breeding purposes. In the present study, the genetic diversity and classification of 45 Iranian and 15 foreign melons were evaluated. A greenhouse experiment was laid out as a randomized completely block design with three replications and five plants in each replicates. Fruit number had a positive correlation with female flower numbers, fruit number, and fruit yield. The fruit number, however, correlated negatively with the leaf area. Genotypes with monoicous flowering habit produced female flowers in lower nodes and formed longer fruit. The number of the female flower, fruit number, yield, high total soluble solids (TSS), leaf area, the first node of female appearance, and flesh firmness were amongst the high weighted and more coefficient in the component analysis. For the breeding purpose, all accessions of cluster 4 were andromonoecious and obtained high TSS, leaf area, and flesh firmness. From the first three clusters, 11 accessions were monoecious, which belonged to TN-93-5, TN 92100, TN 921071, TN 922025 (Cluster1), FLTM 27, and FLTM35 (Cluster2), TN921026, TN-94-21, TN- 94-44, TN-94-28, and TN-94-3 (Cluster3). The characteristic of cluster 3 included melons with high female flower and fruit number and fewer number of the first node of female flower. In conclusion, good genetic resources and foreign types for selection are available for improving the breeding of melons based on the evaluated traits.

کلمات کلیدی:

Andromonoecious, Correlation, Female flower, germplasm, Monoecious, selection

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