Variability analysis of lime (*Citrus* sp.) genotypes using morphological markers in the south of Iran

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ABSTRACT:
In this study, morphological characteristics of leaves, flowers, fruit and seeds of 35 acid lime [*Citrus aurantifolia* (Christm.) Swingle] genotypes from south of Iran were evaluated during two successive years. The cluster analysis using Ward's minimum variance assigned genotypes into three groups. The majority of studied genotypes, (about 20 genotypes), were categorized in group 3 (G_3). The dissimilarity matrix based on Gower coefficient showed that there was a significant difference in the range between 0.05 and 0.63 among genotypes. The maximum difference was observed between C_{10} (Mexican lime) and TD_9 genotypes and the minimum difference was found among two genotypes from Minab region (MH_1 and MH_3). The results of Kruskal Wallis Test indicated that there was a significant difference between three separated group genotypes of cluster analysis based on 25 studied characteristics. Over all, the results showed that each group based on their unique characteristics has superior breeding values than other ones and be used to produce desirable hybrids in breeding programs.