Abstract

Clover or trefoil is an annual self-pollinated herbaceous plant in the leguminous pea family Fabaceae. Its highest cultivation diversity is in Iran, Anatolia, and the eastern countries of the Mediterranean Sea in places like Australia, though not as a native To assess the genetic diversity of Persian clover, 15 ecotypes of the plant were .plant prepared in the Research Center of the city of Borojerd and ITS region was The sequences were aligned using ClustalW .amplified and sequence on them method and MegAlign software and the dendrogram of the phylogenetic relationships and the matrix of the differences and the similarities between the The results showed a little genetic variation between the .sequences were drawn ecotypes. According to the results of ITS marker in lack of separating the lines and the landraces of Persian clover based on the geographic location and its key attributes, it can be concluded that ITS indicator is not so suitable for analyzing the intraspecific genetic diversity; but on the basis of a comparison between the lines and the landraces used in this study as well as other plants of different genera of the family Fabaceae (provided on NCBI site), it was revealed that ITS was a useful tool for interspecies and hermaphrodite genetic assessments. Moreover, the numerical value (dN \ dS) was 0.86 indicating the occurrence of pure selection on the studied gene, but it has made no key changes. In one hand, of 740 loci, 671 were without addition and removal and only 69 loci had addition and removal. As a result, since the amount of dN \ dS was less than one and there were just a few addition and removal loci, small variations were recorded between different lines; hence, it may be the reason of ITS inability separating the lines and the landraces. According to the fact that the initial source or origin of the plants belongs to the centers with the greatest variety with Lorestan with the most diverse lines, it is necessary to pay more attention to the process of gathering clover germplasm to exploit eugenics in the .area

Keywords: clover, genetic diversity, ITS

University of Zabol
Graduate School
P A campus

Faculty of Agriculture
Department of Biotechnology and Plant Breeding

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Supervisors:
Dr. M. Solouki
Dr. B. A. Fakheri

Advisor
Er. Bahman Fazeli-Nasab
Dr. Nafiseh Mahdinezhad

By:
Sahar Ansari

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