

Abstract

Salinity of water and soil is the most important abiotic stresses and is one of the mainly difficult in crops production. Considering extension of saline and semi saline areas in world and increasing of population and needing for foods, crops production in saline and semi saline areas and salinity resistance is the most important goals of breeders. In order to investigation of genetic diversity and salinity tolerance in wheat landraces of Azarbaijan, 18 landraces were prepared from national plant gene bank of Iran and cultivated in factorial experimental design based on Randomized Complete Block Design with 3 replication in green house. Treats such as Hydrogen peroxide, Lipid per oxidation, Cell membrane stability, Proline and Ion content were measured. Results indicates that Hydrogen peroxide, Lipid per oxidation, Cell membrane stability, Proline and Na^+ content increased with increasing salinity level. High level of polymorphism was detected among genotypes by using ISSR molecular markers. From the total of 111 visible bands, 95 bands (85/58 %) were polymorphic. The most produced bands were produced by UBC881 (15 bands) which 100% of them were polymorphic. The average produced bands per primer estimated 11.1 bands and the average polymorphic bands per primer estimated 9.5 bands. In comparison with cluster analysis based on data resulted duplicated ISSR bands, demonstrated that these primers were efficient for estimation of genetic similarities among intraspecific bread wheat varieties.

Keywords: Landraces, Genetic diversity, Salinity, bread wheat, ISSR markers



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**Investigation of salinity tolerance in
some of wheat landraces of Azarbaijan
and determination of genetic diversity
with molecular markers and
physiological criteria**

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