

USING MOLECULAR BIOLOGY IN IDENTIFICATION OF GENETIC VARIATION WHEAT/GENOTYPES FOR SALT TOLERANCE.

Wisam M. Dawood* Ibrahim I. AL-Mishhadani ** Ghuffran A. Al-ubaidy***

* Prof. Dr. College of Education for Pure Science- University of Diyala.

wisam_malik@yahoo.com

**Dr. Biotechnology Research Center , AL-Nahrain University.

*** College of Education for Pure Science- University of Diyala.

ABSTRACT

Two experiments were carried out during agricultural season 2013-2014 on wheat crop *Triticum aestivum* L. , first for germination percentage under salinity conditions , seeds of genotypes and local varieties were planted in pots at three salt levels (0, 12,16 ds/m) , using randomized complete block design (RCBD) with three replicates after 10-15 days from the sowing date the percentage of germination was estimated. The second experiment was carried out in the Laboratory to detect selected the genetic variation between genotypes and local cultivar, Seeds were planted in salinized soils at two salt concentrations 0 and 20 ds/m. After 30-35 days from the sowing date, samples of the leaves were taken to extract the DNA to studying genetic variation between selected genotypes and local cultivar using RAPD-PCR technique.

The results revealed that the RAPD-PCR interaction using 7 primer there are differences between genotypes and local varieties , these primers differ in the band number and location and the primer OPC-12 is the best among the primers being show the discriminating power through its production bands with a molecular weight 100bp in genotypes N5 and 2H under conditions of salinity but its not appear band in the local varieties Iraq and Latifia and under the same conditions of salinity, these band may represent the salt tolerance gene responsible for the appearance salt tolerance in genotypes.

Key words: Wheat, Genetic Variation, Genotypes, RAPD, Primers