

Abstract

This study aims to investigate the effect of water and salinity stress on 16 wheat genotypes and identify wheat bread genotypes that tolerate and adapt water and salinity stress under African environmental conditions.

It was done during two growing seasons 2000/2001 and 2001/2002 in Sids Research Station, Ben-Sweef Governorate for the drought treatment and in Giza Research Station for salinity treatment.

The results demonstrated that grain yield was decreased under water stress treatments, 3 and 2 irrigations, during the two seasons for all genotypes except lines (10 and Sakha 8 x Y) which were slightly affected by water deficit conditions. These two genotypes had higher grain yield and almost yield components.

Regarding salinity stress, the results showed that line 23, Sids1, Giza 168 and Sakha 8 had higher grain yield and yield components under salinity level 10 ds m⁻¹. But Sakha 8 and Sids 1 were the lowest in reduction percentage and susceptibility index than the other genotypes.

It could be concluded that Sakha 8 was the best genotype that tolerate water and salinity stress and it is strongly recommended under such conditions.

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