SUMMARY AND CONCLUSION

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The persent study was conducted during two successive seasons , 1986 and 1987 in the greenhouse of Horticultural Research Institute , Giza , Egypt .

Uniform , healthy one year old plants of Gizi and Sultani fig cultivar (Ficus carica) Rissc were the plant material of this study .

In both seasons and during the 1st. week of March ,these plants were planted in plastic bags of 30 Cm. in diameter that had been filled with specific weight of media consisting of clay and sand at equal proportions :

Irrigation was carried out twice weekly by adding 3/4 a liter of tap water to each plant until 10th. May and 15th. May during the first and the second seasons , respectively. Saline solutions were prepared for irrigation at the concentration of tap water (0), 2000 , 4000 , 6000 and 8000 p.p.m. of NaCL , Na_2SO_4 , $CaCL_2$, $MgSO_4$, KCL and K_2SO_4 as well as each concentration was prepared with two levels of sodium absorption ratio (S.A.R.) i.e. 6 and 12. The accumulated salts were removed every 21 days by irrigation with tap water , then it was followed by rewatering with the same salt solution the next day.

Vegetative growth paramoters including stem length , number of leaves / plant , leaf area , dry weight of plant organs (leaves , stems , roots , and total plant dry weight) as well as top / root ratio were also recorded.

Leaf pigments (chlorophyll [A , B] and corotene content were estimated - leaf and root mineral composition included CL , Na , N , P , K , Ca and Mg were determined.

The obtained results could be summarized as follows :

I- Vegetative measurements :

1- The growth (stem length , stem elongation , number of leaves / plant and leaf area) of the tested plants were possitivelly depressed by increasing salinity concentration.

2- Increasing the salt concentration of irrigation water significantly decreased dry weight of plant organs (leaves , stem , roots and total plant dry weight) and top / root ratio in the tested fig plants.

3- Increasing sodium adsorption ratio (S.A.R.) from 6 to 12 levels in the irrigation water resulted in reduction of number of leaves / plant , leaf area and dry weight of different plant organs while it was not effective significantly on both length and its increment.

4- In addition : the effect of interactions between concentration X (S.A.R.),cultivar X concentration and cultivar X concentration X S.A.R. were significantly pronounced for stem length percentage , number of leaves per plant , leaf area and dry weight of plant organs as well as top / root ratio .

5- Sultani cultivar was more sensitive to salinity treatments as it recorded lower values of stem length,lowest leaf number per plant, leaves dry weight and total plant dry weight as compared to Gizi fig cultivar , except the increase in stem length percentage. leaf area and root dry weight .

II. **CHEMICAL ANALYSIS** :-

1- Salinity treatments significantly decreased some pigments content in leaves , as chlorophyll (A) and (B) , while carotene content has not definite trend.

2- Leaves of Gizi cultivar contain lower amount of chlorophyll (A) and carotene than Sultani cultivar.

On the contrary: the opposit was found with chlorophyll (B).

3- Increasing either salt concentrations or S.A.R. levels in irrigation water increased significantly the CL- content in fig leaves and roots.

4- By using different salt concentration, the Na+ , P and Ca+ contents were significantly increased in both leaves and roots of fig plants while N and K content were significantly decreased. Moreover , Mg++ content was significantly increased in leaves while it was decreased in roots.

5- Gizi leave and root samples seemed to contain higher amount of CL^- , Na++ and K but , lower amount of Mg++ as compared to Sultani cultivar. However N and P did not show any definite differences in leaves or roots of both cultivars.

6- The accumulation of N , P , K and Ca++ Mg++ contents was relatively higher in leaves than roots. However , ^-CL and Na+ content was higher in roots than leaves.

As a result of this investigation , man can recommand for nusrsery and orchard fig men under similar condition, to use Gizi cultivar for planting new in orchards due to its relative higher. tolerance for saline irrigation water untill 4000 - 6000 as compared with Sultani cultivar.