Table (19): Effect of interaction between concentration X S.A.P. in irrigation water on Nitrogen and Phosphorus content in leaves and roots of two Fig cultivars during 1986 & 1987 seasons.

TREATMENTS	(N) %						(P) %					
	LEAVES		Average	ROOTS		Average	LEAVES		Average	ROOTS		Average
	1986	1987		1986	1987		1986	1987		1986	1987	
	CONCENTRATION X S.A.R.											
Control (tap water)	3.05	3.03	3.04	2.14	1.90	2.02	0.15	0.15	0.15	0.10	0.08	0.09
2000 P.P.M. S.A.R. 6	2.92	3.01	2.96	2.03	1.85	1.94	0.17	0.17	0.17	0.13	0.08	0.10
2000 P.P.M. S.A.R.12	3.02	3.03	3.02	2.07	2.16	2.11	0.13	0.17	0.15	0.13	0.09	0.10
4000 P.P.M. S.A.R. 6	2.64	3.03	2.83	2.42	2.06	2.24	0.17	0.17	0.17	0.16	0.09	0.12
4000 P.P.M. S.A.R.12	2.65	3.29	2.97	2.24	2.35	2.29	0.18	0.12	0.19	0.14	0.10	0.12
6000 P.P.M. S.A.R. 6	2.56	3.41	2.98	1.97	1.70	1.83	0.14	0.18	0.16	0.14	0.10	0.12
6000 P.P.M. S.A.R.12	2.64	3.59	3.11	2.11	1.58	1.84	0.19	0.13	0.16	0.15	0.05	0.10
8000 P.P.M. S.A.R. 6	2.54	2.26	2.40	1.88	1.68	1.78	0.19	0.20	0.20	0.15	0.10	0.12
8000 P.P.M. S.A.R.12	2.22	2.28	2.25	2.01	1.80	1.90	0.20	0.20	0.20	0.16	0.11	0.12
L.S.D. at 5 %	0.23	0.09		0.14	0.17		N.S.	N.S.		N.S.	N.S.	
at 1 %	0.30	0.13		N.S.	0.23							

Table (21) : Effect of interaction between cultivar X concentrations X S.A.R. in irrigation water on Nitrogen & Phosphorus content in leaves and roots of two Fig cultivars during 1986 & 1987 seasons.

TREATMENTS	(N) %						(P) %					
	LEAVES		Average	ROOTS		Average	LEAVES		Average	ROOTS		Average
	1986	1987		1986	1987		1986	1987		1986	1987	
	CULTIVAR X CONCENTRATION X S. A. R.											
GIZI Control (tap water)	2.98	3.03	3.00	2.40	1.90	2.15	0.15	0.16	0.15	0.09	0.07	0.08
GIZI 2000 P.P.M. S.A.R. 6	2.80	2.83	2.81	2.23	1.80	2.01	0.18	0.18	0.18	0.15	0.08	0.11
GIZI 2000 P.P.M. S.A.R.12	3.00	3.06	3.13	2.30	2.26	2.28	0.11	0.18	0.15	0.15	0.08	0.11
GIZI 4000 P.P.M. S.A.R. 6	2.71	2.70	2.70	2.58	2.10	2.34	0.19	0.17	0.18	0.17	0.09	0.13
GIZI 4000 P.P.M. S.A.R.12	2.95	3.23	3.09	2.38	2.50	2.44	0.20	0.20	0.20	0.13	0.10	0.12
GIZI 6000 P.P.M. S.A.R. 6	2.68	3.26	2.97	2.10	1.70	1.90	0.16	0.18	0.17	0.13	0.10	0.11
GIZI 6000 P.P.M. S.A.R.12	2.73	3.46	3.09	2.13	1.70	1.91	0.21	0.20	0.21	0.14	0.10	0.12
GIZI 8000 P.P.M. S.A.R. 6	2.40	2.50	2.45	2.38	2.30	2.04	0.20	0.21	0.20	0.15	0.09	0.12
GIZI 8000 P.P.M. S.A.R.12	1.98	3.33	2.65	2.28	1.63	2.29	0.21	0.23	0.22	0.17	0.11	0.14
SULTANI Control (tap water)	3.13	3.03	3.08	1.88	1.90	1.89	0.15	0.15	0.15	0.10	0.08	0.09
SULTANI 2000 P.P.M. S.A.R. 6	3.05	3.19	3.12	1.83	1.90	1.86	0.17	0.17	0.17	0.12	0.09	0.10
SULTANI 2000 P.P.M. S.A.R.12	3.05	3.00	3.02	1.85	2.06	1.95	0.15	0.17	0.16	0.12	0.10	0.11
SULTANI 4000 P.P.M. S.A.R. 6	2.58	3.36	2.97	2.26	2.03	2.14	0.16	0.19	0.17	0.15	0.10	0.13
SULTANI 4000 P.P.M. S.A.R.12	2.58	3.36	3.00	2.10	2.20	2.15	0.17	0.16	0.16	0.16	0.11	0.13
SULTANI 6000 P.P.M. S.A.R. 6	2.45	3.56	2.91	1.85	1.70	1.77	0.12	0.19	0.15	0.15	0.11	0.13
SULTANI 6000 P.P.M. S.A.R.12	2.45	3.73	2.85	2.09	1.46	1.77	0.17	0.19	0.18	0.15	0.12	0.13
SULTANI 8000 P.P.M. S.A.R. 6	2.68	3.03	2.45	1.38	1.66	1.52	0.18	0.20	0.19	0.15	0.12	0.13
SULTANI 8000 P.P.M. S.A.R.12	2.68	2.23	3.14	1.75	1.30	1.52	0.18	0.20	0.19	0.15	0.12	0.13
L.S.D. at 5 %	0.32	0.13		N.S.	§0.24		0.01	0.01		0.02	0.01	
at 1 %	0.43	0.18			§0.32		0.02	0.02		0.03	0.02	

e- Potassium content :-

Data from tables (22,23,24 and 25) obviously showed that leaf and root potassium contents were decreased significantly by using different saline solutions as compared with those of tap water (control) treatment during 1986 and 1987 seasons. This result is confirmed with the findings of **Gorton and Cooper (1954)**, who stated that increasing Ca content of irrigation water depressed K concentration of Grapefruit leaves. **Pearson et. al.(1957)** found that increasing levels of salinity, as NaCL in irrigation water caused a decrease in leaf potassium content. Moreover ; some findings were obtained by **Taha(1971)** on Tomato plants ; **Paliwal and Maliwal(1972)** in Okra ; **EL Gizawi(1973)** on Strawberry ; **Mohamed Ali(1979)** and **Sharaf et. al.(1985)** on Thompson seedless and American Grape, **Abdel Messih et. al.(1979)** and **Khamis and Darwish(1981)** on some Citrus rootstock and **Behairy et. al.(1985)** on Guava and Olive seedlings.

Moreover, leaf and root K concentration was varied from one season to another by increasing sodium adsorption ratio (S.A.R.) from 6 to 12, while it was not affected in leaves and roots during 1st. and 2nd. season respectivly. it was decreased significantly in leaves during 1987 and roots during 1986 seasons. This result is in agreement by **Kabeel(1985)**. In this respect ; **Bower and Wadleigh(1949)** reported that increasing the exchangeable Na percentage of the substrate resulted in a decrease in plant K content.

Regarding the response of Fig cultivars. It is quite clear from the present data that leaves and roots of the Sultani Fig

contained in considerably less K+ content than Gizi Fig cultivar. It is also evident that leaves either of treated or untreated plants contained relatively higher percentage of K+ than roots.

Concerning the effect of interaction between concentration X S.A.R. levels on leaf and root potassium content , it is clear from table (23) that the effect was slightly decrease in leaves during the two seasons of study. In addition , it was varied from one season to another as the root K content was concerned.

With respect to , interaction between cultivar X concentration levels , data in table (24) showed that no definite trend in leaf and root potassium content in both Gizi and Sultani Fig cultivars during the study. In addition , the interaction between cultivar X S.A.R. on leaf and root potassium content showed that Gizi cultivar was slightly higher as compared with Sultani cultivar as general trend in both S.A.R. 6 and S.A.R. 12 during 1986 and 1987 seasons.

Data concerning the effect of interaction between cultivar X concentration X S.A.R. on leaf and root potassium content of Gizi and Sultani Fig cultivars are presented in table (25). Generally, the data indicated that the leaf and root potassium content has no definite trend in response to all combinations of saline solutions used for both two cultivars during the study.

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f- Calsium content :-

According to data in tables (22,23,24 and 25), it can be observed that salinity treatments (2000 , 4000 , 6000 and 8000 P.P.M) comparing with control , stimulated plant absorption of calcium. Moreover , all concentrations of saline water caused highly significant increase in both leaf and root Ca percentage than those of the control during the two seasons of study. These results are similarly to that obtained by **Cooper et. al.(1952)** on Citrus. They found that salt (NaCL $CaCL_2$ on milliequivalent basis) treatments increased the calcium content of the leaves of Valencia Orange and Shary red Grapefruit grafted on both Cleopatra Mandarin and sour Orange rootstocks. **Makhija et. al.(1980)** on Guava seedlings, found that rising salinity levels increased leaf Ca content. Similar results were found by **Kabeel(1985)** on Grape, Peach and Plum seedlings.

Concerning the effect of two levels of sodium adsorption ratio (S.A.R.) in irrigation water.it is clear from table(22) that leaf and root Ca- content was slightly increased by increasing sodium adsorption ratio(S.A.R.) from 6 to 12 in irrigation water during the study. These results are similar to that obtained by **Kabeel (1985)** on Grape, Peach and Plum seedlings.

With respect to the two Fig cultivars under investigation, it is clear from table (22) that Ca-contents in Sultani Fig leaves and roots were decreased significantly than those in Gizi Fig cultivar during 1986 and 1987 seasons. Moreover, the rate of Ca++ accumulation was higher in leaves than in roots during the study.

Regarding the effect of interactions between salt concentration X S.A.R. , cultivar X concentration and cultivar X concentration X S.A.R. on leaf and root calcium content. It is clear from tables (23,24 and 25) that the effect was significantly cincreased calcium content while the interaction between cultivar X S.A.R. data in table (24) indicated that the effect was slightly increase calcium content in Gizi than Sultani cultivar during the study.

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Table (22): Specific effect of concentration , S.A.R. and cultivar in irrigation water on Potassium and Calcium content in leaves and roots of two Fig cultivars during 1986 & 1987 seasons.

TREATMENTS	(K) %						(Ca) %					
	LEAVES		Average	ROOTS		Average	LEAVES		Average	ROOTS		Average
	1986	1987		1986	1987		1986	1987		1986	1987	
Concentration												
Control (tap water)	2.75	1.40	2.08	1.63	0.60	1.62	3.15	3.43	3.29	1.53	1.74	1.64
2000 P.P.M.	2.44	1.26	1.85	1.22	0.47	0.85	3.53	3.63	3.58	1.90	1.86	1.88
4000 P.P.M.	2.49	1.11	1.80	1.55	0.36	0.96	3.63	3.94	3.79	2.04	2.22	2.13
6000 P.P.M.	2.36	1.16	1.76	1.33	0.36	0.85	4.25	4.30	4.28	2.27	2.57	2.42
8000 P.P.M.	2.41	1.19	1.80	1.15	0.36	0.73	4.50	4.60	4.55	2.37	2.98	2.68
L.S.D. at 5 %	0.22	0.06		0.06	0.14		0.18	0.09		0.05	0.03	
at 1 %	0.29	0.09		0.09	0.20		0.24	0.12		0.07	0.04	
S. A. R.												
S.A.R. 6	2.49	1.51	2.00	1.47	0.43	0.95	3.81	3.87	3.84	1.97	2.20	2.09
S.A.R. 12	2.50	1.29	1.90	1.28	0.43	0.86	3.80	4.09	3.95	2.07	2.34	2.21
L.S.D. at 5 %	N.S.	0.14		0.04	N.S.		N.S.	0.05		N.S.	N.S.	
at 1 %		0.19		0.05				0.07				
Cultivars												
Gizi	2.87	1.54	2.21	1.51	0.50	1.00	4.03	4.05	4.04	2.13	2.27	2.20
Sultani	2.12	0.99	1.56	1.24	0.30	0.77	3.79	3.91	3.85	1.91	2.24	2.08
L.S.D. at 5 %	0.14	0.14		0.14	0.09		0.11	0.05		0.03	0.02	
at 1 %	0.18	0.19		0.18	0.12		0.15	0.07		0.04	0.03	