Table 4. Effect of three orange cvs., two rootstock and their interaction on yield (kg) and some fruit physical characteristics in 2010 and 2011 seasons

Parameters	Yield/ tree (kg)			Fruit weight(gm)			Pulp weight (gm)			Fruit height (cm)			Fruit diameter (cm)			Peel Thickness (mm)			Juice Volume/fruit (ml)		
Root stocks / Cultivars	S.O	V.L	Mean	S.O	V.L	Mean	S.O	V.L	Mean	S.O	V.L	Mean	S.O	V.L	Mean	S.O	V.L	Mean	S.O	V.L	Mean
First season																					
NavelOrange	30.1b	33.5a	31.8A	218.5b	228.6a	223.6A	129.1b	152.8a	135.2A	8.1b	8.7a	8.4A	7.7b	7.9a	7.8A	3.5c	4.1ab	3.8A	84.2e	92.5d	88.3B
ValenciaOrange	23.6cd	25.7c	24.7B	188.8c	213.9b	201.4B	126.5b	143.8a	141.0A	7.6c	8.2b	7.9B	7.3c	7.8ab	7.6B	3.7bc	4.3a	4.0A	99.9c	116.4a	108.1A
Baladi Orange	20.8d	24.7c	22.8B	150.1d	154.8d	152.4C	98.7d	112.0c	105.4B	4.9e	5.3d	5.1C	4.8d	5.0d	4.9C	3.6bc	4.4a	4.0A	99.8c	107.9b	103.9A
Mean	24.9B\	27.9A\		185.8B\	199.1A\		118.1B\	136.2A\		6.9B\	7.4A\		6.6B\	6.9A\		3.6B\	4.3A\		94.6B\	105.6A\	
Second season																					
Navel Orange	30.6b	35.2a	32.9A	219.6b	231.4a	204.8B	131.8c	154.1a	137.5A	8.1ab	8.5a	8.3A	7.6c	8.2a	7.7B	3.9bc	4.3a	4.1A	87.2e	92.7d	89.9C
Valencia Orange	24.1cd	26.4c	25.3B	192.2c	217.4b	225.5A	129.1c	145.9b	142.9A	7.7b	8.0ab	7.9B	7.9d	7.9b	7.9A	4.0b	4.3a	4.2A	100.7c	118.0a	109.4A
Baladi Orange	21.3d	24.4cd	22.9B	150.1e	155.8d	153.0C	97.7e	110.0d	103.9B	4.8d	5.6c	5.1C	4.7f	5.1e	4.9C	3.6c	4.1ab	3.9B	99.78	106.9b	103.3B
Mean	25.4B\	28.7A\		187.3B\	201.5A\		119.5B\	136.7A\		6.8B\	7.4A\		7.1A\	6.6B\		3.8A\	4.3A\		95.9B\	105.9A\	

Means having the same letter (S) in each column, row and interaction are not significant at 5% level.

S.O = Sour Orange - V.L= Volkamer lemon

Table 6. Effect of three orange cvs, two rootstocks and their interaction on leaf macro elements content in 2010 and 2011 seasons

Element	N%			P%			K%			Ca%			Mg%		
Root stocks Cultivars	S.O	V.L	Mean	S.O	V.L	Mean	S.O	V.L	Mean	S.O	V.L	Mean	S.O	V.L	Mean
first season															
Navel Orange	2.25d	2.24d	2.25C	0.26ab	0.26ab	0.29A	1.65c	1.70bc	1.68B	3.46b	3.69b	3.58B	0.417d	0.567bc	0.492B
ValenciaOrange	2.81b	2.95a	2.88A	0.29ab	0.32a	0.31A	1.75b	1.86a	1.81A	3.80a	3.88a	3.84A	0.557c	0.620ab	0.588A
Baladi Orange	2.85c	2.64c	2.61B	0.18c	0.24b	0.21B	1.35d	1.41d	1.38C	3.79a	3.61ab	3.70AB	0.557c	0.673a	0.615A
Mean	2.54B\	2.61A\		0.24B\	0.29A\		1.58B\	1.66A\		3.68A\	3.73A\		0.51B\	0.62A\	
second season															
Nave Orange	2.29e	2.61cd	2.45C	0.25bc	0.36a	0.30A	1.63b	1.73ab	1.68B	3.75a	3.74ab	3.75A	0.417b	0.553a	0.485B
Valencia Orange	2.84ab	2.95a	2.89A	0.31ab	0.34a	.033A	1.75a	1.83a	1.79A	3.72ab	3.81a	3.77A	0.613a	0.627a	0.620A

Baladi Orange	2.54d	2.72 bc	2.63B	0.19c	0.23c	0.21B	1.44c	1.52c	1.48 C	3.59c	3.62bc	3.60B	0.567 a	0.643 a	0.60 5A
Mean	2.56B\	2.76 A\		0.25B\	0.31A\		1.61B\	1.96A\		3.69A\	3.72A\		0.532 B\	0.608 A\	

Means having the same letter (S) in each column, row and interaction are not significant at 5% level.

S.O = Sour Orange.- V.L = Volkamer lemon

Table 7. Effect of three orange cvs, two rootstock and their interaction on leaf micro elements content in 2010 and 2011 seasons

Element	Fe ppm			Mn ppm			Zn ppm			Cu ppm		
Root stocks / Cultivars	S.O	V.L	Mean	S.O	V.L	Mean	S.O	V.L	Mean	S.O	V.L	Mean
First season												
Navel Orange	56.98d	87.13b	72.05B	63.95b	51.65e	57.80B	56.54d	61.74c	59.14C	8.07d	9.29c	8.68
Valencia Orange	63.87c	121.60a	92.72A	77.51a	58.52c	68.01A	61.44c	69.54a	65.49A	11.26b	13.96a	12.61A
Baladi Orange	56.53d	91.71b	74.12B	64.16b	55.53d	59.85B	57.60d	63.28b	60.44B	10.04c	11.33e	10.69B
Mean	59.13B\	100.10A\		68.54A\	55.23B\		58.53B\	64.85A\		9.79B\	11.53A\	
Second season												
Navel Orange	54.19e	81.71c	67.95C	68.00b	59.28c	63.64B	59.99cd	72.12ab	66.06AB	8.10e	8.49e	8.30C
Valencia Orange	64.82d	121.50a	93.18A	80.36a	61.06c	70.71A	63.49Bcd	79.16a	71.32A	12.64b	13.73a	13.18A
Baladi Orange	57.53de	91.86b	74.69B	61.53c	55.12d	58.32C	56.46d	68.13Abc	62.29B	10.91d	12.01c	11.46B
Mean	58.85B\	98.37A\		69.96A\	58.48B\		59.98B\	73.13A\		10.55B\	11.41A\	

Means having the same letter (S) in each column, row and interaction are not significant at 5% level.
S.O = Sour Orange.-Vl= volkamer lemon

Table 8. Effect of three Orange cvs., two rootstocks and their interaction on root fresh and dry weight (kg) in 2011 season.

Total F.wt. and d.wt.	Skeletal roots (>5mm)						Semi-skeletal roots (2-5 mm)					
	Total F.wt(Kg)		Mean	Total d.wt(Kg)		Mean	Total F.wt(Kg)		Mean	Total d.wt(Kg)		Mean
Root stocks / Cultivars	S.O	V.L		S.O	V.L		S.O	V.L		S.O	V.L	
Navel Orange	5.48d	6.57b	6.03B	4.12cd	4.85b	4.49B	2.75c	3.12b	2.93B	2.11c	2.41b	2.26B
ValenciaOrange	6.01c	7.16a	6.59A	4.65b	5.37a	5.01A	3.05b	3.34a	3.19A	2.40b	2.64a	2.52A
Baladi Orange	5.19d	6.09c	5.64C	3.81d	4.31c	4.06C	2.44d	3.00b	2.72C	1.79d	2.29bc	2.04C
Mean	5.56B\	6.61A\		4.19B\	4.84A\		2.7 B\	3.15 A\		2.10B\	2.45A\	

Continue Table 8.

Total F.wt. and d.wt.	mm) 2(<Feeder root						Whole root system					
	Total F.wt(Kg)		Mean	Total d.wt(Kg)		Mean	Total F.wt (Kg)		Mean	Total d.wt(Kg)		Mean
Root stocks / Cultivars	S.O	V.L		S.O	V.L		S.O	V.L		S.O	V.L	
Navel Orange	4.61bc	5.43ab	5.02AB	2.38de	3.96ab	3.17AB	12.84cd	15.12b	13.98B	8.61c	11.23b	9.92B
ValenciaOrange	5.23ab	6.04a	5.64A	2.97cd	4.58a	3.78A	14.28b	16.54a	15.41A	10.02b	12.59a	11.31A
Baladi Orange	4.06c	4.92bc	4.49B	1.83e	3.47bc	2.65B	11.70d	14.01bc	12.85C	7.45c	10.07b	8.76C
Mean	4.63B\	5.46A\		2.39B\	4.00A\		12.94B\	15.22A\		8.69B\	11.29A\	

Means having the same letter (S) in each column, row and interaction are not significant at 5% level.
S.O = Sour Orange. – Vl= volkamer lemon