

Table(1): Effect of suckering and girdling on shoot total carbohydrate (C), %, shoot total nitrogen (N), % and C/N ratio of Manfalouty pomegranate trees during 2004, 2005, 2006 and 2007 seasons.

Suckering (S)	Year (Y) Girdling (G)	Shoot total carbohydrate (%)					Shoot total nitrogen (%)					C/N ratio				
		2004	2005	2006	2007	Mean	2004	2005	2006	2007	Mean	2004	2005	2006	2007	Mean
Non-suckering	*Control	13.29	13.20	13.09	13.08	13.17	2.57	2.56	2.55	2.54	2.56	5.17	5.16	5.14	5.15	5.15
	3 mm	13.88	13.88	13.86	13.84	13.87	2.44	2.44	2.42	2.41	2.43	5.69	5.70	5.74	5.74	5.72
	6 mm	13.85	13.84	13.83	13.79	13.83	2.37	2.39	2.38	2.37	2.38	5.84	5.78	5.81	5.81	5.81
	9 mm	13.85	13.83	13.82	13.78	13.82	2.38	2.37	2.37	2.35	2.37	5.82	5.83	5.84	5.85	5.84
Mean		13.72	13.69	13.65	13.62	13.67	2.44	2.44	2.43	2.42	2.43	5.63	5.62	5.63	5.64	5.63
Suckering	0 mm	16.41	16.48	16.50	16.60	16.50	2.64	2.62	2.61	2.58	2.61	6.22	6.28	6.32	6.43	6.31
	3 mm	17.49	17.79	17.80	17.93	17.75	2.57	2.58	2.58	2.57	2.58	6.81	6.90	6.90	6.98	6.89
	6 mm	17.53	17.70	17.70	17.89	17.71	2.58	2.57	2.57	2.57	2.57	6.79	6.89	6.90	6.96	6.89
	9 mm	17.53	17.68	15.73	16.38	16.83	2.58	2.56	2.61	2.58	2.58	6.80	6.91	6.03	6.34	6.53
Mean		17.24	17.41	16.93	17.20	17.20	2.59	2.58	2.59	2.58	2.59	6.66	6.74	6.54	6.68	6.65
Mean	0 mm	14.85	14.84	14.80	14.84	14.83	2.61	2.59	2.58	2.56	2.59	5.69	5.72	5.73	5.79	5.73
	3 mm	15.69	15.84	15.83	15.89	15.81	2.51	2.51	2.50	2.49	2.50	6.25	6.30	6.32	6.36	6.32
	6 mm	15.69	15.77	15.76	15.84	15.77	2.48	2.48	2.47	2.47	2.48	6.32	6.34	6.35	6.39	6.35
	9 mm	15.69	15.75	14.78	15.08	15.32	2.48	2.47	2.49	2.47	2.48	6.31	6.37	5.93	6.10	6.18
Over all mean		15.48	15.55	15.29	15.41	15.44	2.52	2.51	2.51	2.50	2.51	6.14	6.18	6.08	6.16	6.14

T. Dunnett 5%	Year (Y)	Suckering (S)	Girdling (G)	YxS	YxG	SxG	YxSxG
Shoot total carbohydrate (%)	0.19	**	0.19	0.26	0.36	0.261	0.522
Shoot total nitrogen (%)	0.004	**	0.004	0.004	0.009	0.004	0.009
C/N ratio	0.07	**	0.07	0.099	0.139	0.099	0.199

* Non-suckering without girdling

Table(2): Effect of suckering and girdling on fruit set percentage, yield (kg/tree) and commercial yield (%) of Manfalouty pomegranate trees during 2004, 2005, 2006 and 2007 seasons.

Suckering (S)	Year(Y)	Fruit set (%)					Yield (kg/tree)					Commercial yield (%)				
	Girdling (G)	2004	2005	2006	2007	Mean	2004	2005	2006	2007	Mean	2004	2005	2006	2007	Mean
Non-suckering	*Control	36.65	34.48	34.85	33.91	34.98	40.83	39.21	35.55	33.32	37.23	65.40	63.31	62.31	61.70	63.18
	3 mm	37.18	33.36	33.35	32.25	34.04	43.61	42.07	38.42	35.20	39.82	66.55	64.36	63.47	61.66	64.01
	6 mm	36.65	33.45	33.26	32.15	33.88	43.13	41.12	37.80	34.12	39.04	67.65	65.35	64.37	60.72	64.52
	9 mm	36.35	33.50	33.55	32.35	33.94	42.83	41.20	36.62	33.21	38.46	67.60	66.48	65.66	62.45	65.55
Mean		36.71	33.70	33.75	32.67	34.21	42.60	40.90	37.10	33.96	38.64	66.80	64.88	63.95	61.63	64.31
Suckering	0 mm	36.50	52.65	53.05	54.15	49.09	77.50	80.20	85.20	90.71	83.40	80.65	85.66	87.35	88.35	85.50
	3 mm	35.85	58.75	59.10	59.25	53.24	82.40	86.30	95.30	100.80	91.20	85.50	87.45	88.54	91.15	88.16
	6 mm	36.70	57.55	58.15	58.25	52.66	83.21	85.40	93.50	98.72	90.21	83.43	86.35	87.20	88.24	86.31
	9 mm	36.75	56.45	46.70	45.85	46.44	83.10	85.39	75.82	70.78	78.77	84.35	85.37	76.48	65.75	77.99
Mean		36.45	56.35	54.25	54.38	50.36	81.55	84.32	87.46	90.25	85.90	83.48	86.21	84.89	83.37	84.49
Mean	0 mm	36.57	43.57	43.95	44.03	42.03	59.16	59.70	60.38	62.02	60.31	73.03	74.49	74.83	75.02	74.34
	3 mm	36.52	46.05	46.22	45.75	43.64	63.01	64.18	66.86	68.00	65.51	76.03	75.91	76.00	76.40	76.09
	6 mm	36.68	45.50	45.71	45.20	43.27	63.17	63.26	65.65	66.42	64.62	75.54	75.85	75.78	74.48	75.41
	9 mm	36.55	44.98	40.12	39.10	40.19	62.97	63.29	56.22	51.99	58.62	75.98	75.92	71.07	64.10	71.77
Over all mean		36.58	45.03	44.00	43.52	42.29	62.08	62.61	62.28	62.11	62.27	75.14	75.54	74.42	72.50	74.40

T. Dunnett 5%	Year (Y)	Suckering (S)	Girdling (G)	YxS	YxG	SxG	YxSxG
Fruit set (%)	0.04	**	0.04	0.06	0.072	0.058	0.10
Yield (kg/tree)	0.10	**	0.10	0.145	0.203	0.145	0.29
Commercial yield (%)	0.017	**	0.017	0.025	0.038	0.025	0.054

* Non-suckering without girdling

Table (3): Effect of suckering and girdling on fruit splitting percentage, fruit weight (g) and grain/fruit weight percentage of Manfalouty pomegranate trees during 2004, 2005, 2006 and 2007 seasons.

Suckering (S)	Year (Y) Girdling (G)	Splitting (%)					Fruit weight (g)					Grain/fruit weight (%)				
		2004	2005	2006	2007	Mean	2004	2005	2006	2007	Mean	2004	2005	2006	2007	Mean
Non-suckering	*Control	11.28	11.56	11.65	12.18	11.67	354.7	357.3	345.0	344.3	350.3	54.73	54.43	54.37	54.23	54.44
	3 mm	11.78	12.08	12.19	12.45	12.13	337.7	335.3	330.7	328.0	332.9	54.23	54.17	54.13	54.09	54.16
	6 mm	11.87	12.28	12.35	12.55	12.26	332.3	330.0	329.7	321.0	328.3	54.20	54.10	54.02	54.17	54.12
	9 mm	12.08	12.41	12.45	12.50	12.36	331.7	328.7	324.0	320.0	326.1	54.20	54.17	53.68	54.10	54.04
Mean		11.75	12.08	12.16	12.42	12.10	339.1	337.8	332.3	328.3	334.4	54.34	54.22	54.05	54.15	54.19
Suckering	0 mm	7.87	7.78	7.65	7.26	7.64	521.0	525.3	535.0	545.3	531.7	60.92	60.30	60.63	60.60	60.61
	3 mm	6.87	5.82	5.75	5.68	6.03	570.0	575.0	570.0	572.0	571.8	60.42	60.42	60.73	60.60	60.54
	6 mm	6.42	6.80	6.85	6.92	6.75	560.0	555.0	550.0	540.3	551.3	60.57	60.27	60.43	60.10	60.34
	9 mm	6.36	6.72	7.75	10.85	7.92	561.0	560.0	545.3	480.0	536.6	60.78	60.10	59.07	56.30	59.06
Mean		6.88	6.78	7.00	7.68	7.08	553.0	553.8	550.1	534.4	547.8	60.67	60.27	60.22	59.40	60.14
Mean	0 mm	9.58	9.67	9.65	9.72	9.65	437.8	441.3	440.0	444.8	441.0	57.83	57.37	57.50	57.42	57.53
	3 mm	9.32	8.95	8.97	9.07	9.08	453.8	455.2	450.3	450.0	452.3	57.33	57.29	57.43	57.35	57.35
	6 mm	9.15	9.54	9.60	9.73	9.50	446.2	442.5	439.8	430.7	439.8	57.38	57.18	57.23	57.13	57.23
	9 mm	9.22	9.57	10.10	11.68	10.14	446.3	444.3	434.7	400.0	431.3	57.49	57.13	56.38	55.20	56.55
Over all mean		9.32	9.43	9.58	10.05	9.59	446.0	445.8	441.2	431.4	441.1	57.51	57.24	57.13	56.77	57.16

T-Dunnett 5%	Year (Y)	Suckering (S)	Girdling (G)	YxS	YxG	SxG	YxSxG
Splitting (%)	0.015	**	0.39	0.03	0.03	0.03	0.04
Fruit weight (g)	1.31	**	1.31	2.03	3.45	2.03	4.21
Grain/fruit weight (%)	0.26	**	0.26	0.38	0.52	0.38	0.74

* Non-suckering without girdling

Table(4): Effect of suckering and girdling on total soluble solids percentage (TSS), titratable acidity percentage, TSS/acid ratio and reducing sugar percentage of Manfalouty pomegranate trees during 2004, 2005, 2006 and 2007 seasons.

Sucker- ing (S)	Year (Y) Girdling (G)	TSS (%)					Titratable acidity (%)					TSS/ acid ratio					Reducing sugar (%)				
		2004	2005	2006	2007	Mean	2004	2005	2006	2007	Mean	2004	2005	2006	2007	Mean	2004	2005	2006	2007	Mean
Non- suckerin g	*Control	14.15	14.07	14.14	14.14	14.12	1.230	1.240	1.250	1.270	1.247	11.50	11.34	11.32	11.13	11.32	11.06	11.06	11.06	11.05	11.06
	3 mm	14.14	14.12	14.07	14.07	14.10	1.240	1.250	1.270	1.267	1.257	11.41	11.30	11.08	11.11	11.22	11.06	11.06	11.06	11.06	11.06
	6 mm	14.13	14.12	14.03	14.03	14.08	1.230	1.240	1.253	1.260	1.246	11.48	11.39	11.20	11.14	11.30	11.06	11.04	11.05	11.04	11.05
	9 mm	14.13	14.11	14.10	14.03	14.09	1.240	1.250	1.277	1.270	1.259	11.39	11.29	11.05	11.05	11.20	11.05	11.05	11.05	11.04	11.05
Mean		14.14	14.11	14.09	14.07	14.10	1.235	1.245	1.263	1.267	1.252	11.45	11.33	11.16	11.11	11.26	11.06	11.05	11.05	11.05	11.05
Sucker- ing	0 mm	16.37	16.40	16.45	16.55	16.44	1.140	1.190	1.197	1.203	1.183	14.36	13.78	13.75	13.76	13.91	11.60	11.64	11.63	11.62	11.62
	3 mm	17.24	17.28	17.28	17.26	17.27	1.097	1.077	1.067	1.060	1.075	15.72	16.05	16.20	16.28	16.06	11.74	11.86	11.84	11.83	11.82
	6 mm	17.18	17.16	17.12	17.11	16.14	1.103	1.087	1.103	1.110	1.101	15.57	15.79	15.52	15.42	15.58	11.75	11.85	11.83	11.84	11.82
	9 mm	17.24	17.20	16.80	16.40	16.91	1.110	1.097	1.177	1.190	1.143	15.53	15.69	14.28	13.78	14.82	11.73	11.76	11.63	11.66	11.69
Mean		17.01	17.01	16.91	16.83	16.94	1.112	1.113	1.136	1.141	1.125	15.30	15.33	14.94	14.81	15.09	11.71	11.78	11.73	11.74	11.74
Mean	0 mm	15.26	15.23	15.30	15.34	15.28	1.185	1.215	1.223	1.237	1.215	12.93	12.56	12.53	12.44	12.62	11.73	11.35	11.35	11.34	11.34
	3 mm	15.69	15.70	15.68	15.67	15.68	1.168	1.163	1.168	1.163	1.166	13.56	13.68	13.64	13.70	13.64	11.40	11.46	11.45	11.44	11.44
	6 mm	15.65	15.64	15.58	15.57	15.61	1.167	1.163	1.178	1.185	1.173	13.53	13.59	13.36	13.28	13.44	11.40	11.45	11.44	11.44	11.43
	9 mm	15.68	15.66	15.45	15.22	15.50	1.175	1.173	1.227	1.230	1.201	13.46	13.49	12.66	12.42	13.01	11.39	11.41	11.34	11.35	11.37
Over all mean		15.57	15.56	15.50	15.45	15.52	1.174	1.179	1.199	1.204	1.189	13.37	13.33	13.05	12.96	13.18	11.38	11.42	11.39	11.39	11.40

T-Dunnett 5%	Year (Y)	Suckering (S)	Girdling (G)	YxS	YxG	SxG	YxSxG
TSS (%)	0.07	**	0.07	0.10	0.131	0.10	0.19
Titratable acidity (%)	0.004	**	0.004	0.004	0.009	0.004	0.013
TSS/acid ratio	0.06	**	0.06	0.09	0.12	0.009	0.17
Reducing sugar (%)	0.00	**	0.00	0.01	0.01	0.01	0.01
* Non-suckering without girdling							