Table 2. Effect of some slow and fast release N fertilizers on some growth characters in Spring, Summer, and Autumn growth cycles of Keitt and Figri Kelan mango trees during 2004 and 2005 seasons

Fertilizers	Spring growth cycle											
	Keitt						Figri Kelan					
	Shoot length (cm)		No of leaves/shoot		Leaf area (cm^2)		Shoot length		No of leaves/shoot		Leaf area (cm^2)	
	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005
SCU	18.00	20.00	9.00	9.80	83.64	92.01	15.00	18.30	11.00	11.45	78.74	91.65
PCU	16.00	17.00	8.00	8.33	77.12	83.64	13.00	17.00	10.66	10.90	74.01	87.14
ENC	13.00	16.00	8.00	8.10	67.19	76.85	13.00	16.50	10.00	10.90	65.44	82.17
AN	12.00	13.00	7.00	7.00	58.80	70.70	12.00	15.00	9.00	9.10	61.94	72.09
New L.S.D at 5%	0.90	1.10	0.90	0.80	2.22	2.25	0.9	0.9	0.9	0.7	2.92	2.94
Fertilizers	Summer growth cycle											
	Keitt						Figri Kelan					
	Shoot length (cm)		No of leaves/shoot		Leaf area (cm^2)		Shoot length (cm)		No of leaves/shoot		Leaf area (cm^2)	
	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005
SCU	11.60	11.90	9.00	10.00	24.66	29.00	18.33	20.00	13.75	14.00	48.92	55.64
PCU	10.53	11.45	8.60	9.00	22.74	24.91	18.00	20.00	13.50	13.90	42.83	47.10
ENC	10.00	11.10	8.60	8.60	19.73	21.34	17.63	18.00	13.00	13.70	38.14	42.45
AN	9.53	9.85	8.20	8.30	14.18	16.90	17.00	17.63	12.00	13.00	33.59	38.14
New L.S.D at 5%	0.33	0.41	0.30	0.29	2.22	2.29	0.51	0.42	0.41	0.52	3.00	3.22

Table 2. Cont.

Fertilizers	Autumn growth cycle											
	Keitt						Figri Kelan					
	Shoot length (cm)		No of leaves/shoot		Leaf area (cm^2)		Shoot length (cm)		No of leaves/shoot		Leaf area (cm^2)	
	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005
SCU	18.00	19.40	10.80	11.90	64.39	74.54	20.00	21.40	11.00	11.85	41.50	48.18
PCU	18.00	19.00	10.29	11.00	55.64	63.86	18.10	19.11	10.65	11.45	37.37	44.67
ENC	17.20	18.48	9.66	10.56	52.36	56.70	18.10	18.78	10.10	11.00	28.70	38.84
AN	15.20	16.11	9.00	10.33	44.70	49.34	17.40	18.00	9.75	10.66	23.58	29.56
New L.S.D at 5%	1.11	1.23	0.56	0.39	2.30	3.11	0.55	0.62	0.33	0.35	3.32	4.11

SCU: Sulphur-coated urea; PCU: Phosphorus-coated urea; ENC: Enciabene; AN: Ammonium nitrate.

Table 3. Effect of some slow and fast release N fertilizers on the percentages of N, P, and K in leaves of Keitt and Figri Kelan mango trees during 2004 and 2005 seasons

Fertilizers	Keitt						Figri Kelan					
	N%		P%		K%		N%		P%		K%	
	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005
SCU	1.91	1.92	0.33	0.31	1.741	1.40	1.71	1.80	0.32	0.32	1.37	1.33
PCU	1.66	1.79	0.30	0.27	1.31	1.30	1.55	1.51	0.28	0.27	1.25	1.26
ENC	1.56	1.50	0.26	0.24	1.21	1.20	1.41	1.37	0.25	0.23	1.20	1.18
AN	1.41	1.42	0.36	0.34	1.45	1.46	1.30	1.22	0.35	0.34	1.42	1.44
New L.S.D at 5%	0.04	0.06	0.02	0.03	0.04	0.05	0.06	0.07	0.02	0.03	0.06	0.05

SCU: Sulphur-coated urea; PCU: Phosphorus-coated urea; ENC: Enciabene; AN: Ammonium nitrate.

Table 4. Effect of some slow and fast release N fertilizers on date of first bloom, No of panicles/tree, fruit retention % and yield/tree of Keitt and Figri Kelan mango trees during 2004 and 2005 seasons

Fertilizers	Keitt							
	First bloom date		No of panicles/tree		Fruit retention %		Yield/tree (Kg)	
	2004	2005	2004	2005	2004	2005	2004	2005
SCU	1st week of Feb.	1st week of Feb.	120.0	200.0	0.75	0.82	55.00	80.00
PCU	2nd week of Feb.	2nd week of Feb.	115.0	185.0	0.60	0.70	46.00	69.00
ENC	2nd week of Feb.	2ndweek of Feb.	100.0	170.0	0.52	0.60	41.00	68.00
AN	3rd week of Feb.	3rd week of Feb.	90.0	145.0	0.40	0.42	35.00	58.00
New L.S.D at 5%	—	—	8.0	10.0	0.07	0.08	3.30	4.10

Table 4. Cont.

Fertilizers	Figri Kelan							
	First bloom date		No of panicles/tree		Fruit retention %		Yield/tree (Kg)	
	2004	2005	2004	2005	2004	2005	2004	2005
SCU	1st week of Feb.	2nd week of Feb.	200.0	290.0	0.92	0.92	90.00	120.00
PCU	2nd week of Feb.	3rd week of Feb.	193.0	250.0	0.81	0.79	85.00	112.00
ENC	2nd week of Feb.	3rd week of Feb.	187.0	235.0	0.62	0.66	77.00	100.00
AN	3rd week of Feb.	4th week of Feb.	180.0	200.0	0.41	0.45	70.00	89.00
New L.S.D at 5%	—	—	6.0	11.0	0.10	0.09	4.10	5.20

SCU: Sulphur-coated urea; PCU: Phosphorus-coated urea; ENC: Enciabene; AN: Ammonium nitrate.

Table 5. Effect of some slow and fast release N fertilizers on some physical fruit characters of Keitt and Figri Kelan mango trees during 2004 and 2005 seasons

Fertilizers	Keitt						Figri Kelan					
	Fruit weight (g)		Fruit width (cm)		Fruit length (cm)		Fruit weight (g)		Fruit width (cm)		Fruit length (cm)	
	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005
SCU	400.13	453.76	8.50	8.76	12.80	13.30	471.80	513.50	9.20	9.70	15.00	15.30
PCU	399.00	431.70	8.30	8.65	12.75	13.15	456.20	500.90	9.00	9.30	15.00	15.10
ENC	366.00	416.40	8.20	8.50	12.60	13.00	436.70	485.00	8.90	9.10	14.90	15.00
AN	340.00	408.00	8.00	8.25	12.50	12.80	420.00	473.30	8.50	9.00	14.70	14.80
New L.S.D at 5%	9.10	7.10	0.09	0.07	0.06	0.07	10.10	9.20	0.09	0.08	0.09	0.10

SCU: Sulphur-coated urea; PCU: Phosphorus-coated urea; ENC: Enciabene; AN: Ammonium nitrate.

Table 6. Effect of some slow release N fertilizers on some chemical fruit characters of Keitt and Figri Kelan mango trees during 2004 and 2005 seasons

Fertilizers	Keitt						Figri Kelan					
	T.S.S %		Total acidity %		Total sugars %		T.S.S %		Total acidity %		Total sugars %	
	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005
SCU	15.10	15.40	0.430	0.440	11.80	12.00	15.45	16.00	0.379	0.366	12.00	12.30
PCU	15.00	15.20	0.460	0.471	11.40	11.70	15.10	15.50	0.395	0.390	11.80	12.00
ENC	14.90	15.00	0.472	0.491	11.30	11.50	15.00	15.20	0.410	0.400	11.60	11.90
AN	14.50	14.80	0.490	0.499	11.00	11.35	14.90	15.00	0.430	0.415	11.30	11.40
New L.S.D at 5%	0.08	0.10	0.007	0.010	0.11	0.20	0.09	0.10	0.009	0.010	0.22	0.30
Fertilizers	Keitt						Figri Kelan					
	Reducing sugars %		Sucrose %		Ascorbic acid (mg/100 g pulp)		Reducing sugars %		Sucrose %		Ascorbic acid (mg/100 g pulp)	
	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005
SCU	5.82	5.62	5.98	6.38	22.80	23.00	5.62	5.83	6.38	6.47	24.10	26.00
PCU	5.61	5.51	5.79	6.19	21.50	22.20	5.51	5.62	6.29	6.38	23.50	25.70
ENC	5.41	5.31	5.89	6.19	21.10	21.45	5.31	5.41	6.29	6.49	23.00	24.30
AN	5.21	5.10	5.79	6.25	20.80	21.00	5.11	5.20	6.19	6.20	22.75	23.00
New L.S.D at 5%	0.10	0.07	NS	NS	0.20	0.30	0.05	0.07	NS	NS	0.22	0.44

SCU: Sulphur-coated urea; PCU: Phosphorus-coated urea; ENC: Enciabene; AN: Ammonium nitrate.

جداول بحث د. سناء

Table 1. Effect some chemical material and germination media on the germination period, germination percentage and period to reaching grafting size of *Casimiroa* seedlings during (2002/3 and 2003/4, seasons)

Media	Peat + clay			Peat + sand			Sand + clay			Peat + sand + clay			Average		
Treatments	Germination Period	Germination %	Days For Grafting time	Days For Ger.	% Ger	Days For grafting	Days For Ger.	% Ger	Days For grafting	Days For Ger.	% Ger	Days For grafting	Days For Ger.	% Ger	Days For grafting
(First season)															
Control	28.1	54.8	274	26.4	59.0	264	29.4	50.2	281	26.0	50.1	276	27.5	53.5	273.8
$MgSo_4$ 5 %	22.0	83.7	183	19.3	92.1	179	24.0	78.7	191	23.5	79.4	190	22.2	83.6	185.7
KNO_3 1 %	24.5	76.2	226	23.2	78.4	221	24.6	69.4	234	24.7	70.0	229	24.3	73.5	228.3
$KHPO_4$ 1 %	26.3	71.4	231	25.9	73.7	229	26.0	64.3	234	25.3	65.2	232	25.9	68.7	231.5
Dormex 2 %	26.5	60.2	245	25.9	62.6	237	26.1	57.6	247	25.6	59.4	246	26.0	60.0	243.7
Average	25.5	69.3	231.8	24.1	73.2	226.0	26.0	64.0	237.4	25.2	64.8	234.6			
(Second season) .															
Control	28.7	53.6	270	25.0	60.2	261	29.0	51.1	283	26.0	50.1	271	27.2	53.8	271.3
$MgSo_4$ 5 %	21.8	84.1	187	19.1	94.8	180	24.1	77.4	196	23.5	79.4	191	22.1	83.9	188.5
KNO_3 1 %	24.0	77.0	230	22.8	78.6	224	24.7	69.2	238	24.7	70.0	227	24.1	73.7	229.8
$KHPO_4$ 1 %	27.2	72.2	235	25.6	74.1	226	25.3	61.0	239	25.3	65.2	231	25.9	68.1	232.3
Dormex 2 %	27.4	63.4	241	25.7	66.5	232	25.8	60.1	234	25.6	59.4	242	26.1	62.4	239.5
Average	25.8	70.1	232.6	23.6	74.8	224.6	25.9	63.8	239.8	25.0	64.8	232.4			

New L.S.D at	Germ. period		Germ %		Days for grafting time	
0.05	(first season)	(second season)	(first season)	(second season)	(first season)	(second season)
Treatments	2.13	2.42	3.01	2.18	4.83	3.96
Media	2.06	1.96	2.74	2.01	4.27	5.01
TXM	5.71	4.86	6.21	4.57	7.31	6.72

Table 2. Effect of growing media and certain inorganic treatments on stem height and stem diameter of *Casimiroa* seedlings during (2002/3 and 2003/4, seasons)

Media	Peat + clay		Peat + Sand		Sand + clay		Peat + sand + clay		Average	
Treatments	Stem height	Stem diameter	Stem height	Stem diameter	Stem height	Stem diameter	Stem height	Stem diameter	Stem height	Stem diameter
(First season)										
Control	39.2	0.3	39.4	0.3	36.0	0.3	40.2	0.4	38.7	0.33
$MgSo_4$ 5 %	54.0	0.5	55.1	0.5	47.1	0.4	55.0	0.5	52.8	0.48
KNO_3 1 %	52.4	0.4	51.6	0.4	46.2	0.4	50.3	0.4	50.1	0.40
$KHPO_4$ 1 %	52.3	0.4	51.5	0.4	46.0	0.4	50.1	0.4	49.9	0.40
Dormex 2 %	47.6	0.3	47.8	0.3	40.3	0.3	47.8	0.3	45.9	0.30
Average	49.1	0.38	49.1	0.38	43.1	0.36	48.7	0.40		
(Second season)										
Control	36.7	0.3	38.7	0.3	35.7	0.3	39.6	0.4	37.7	0.33
$MgSo_4$ 5 %	52.5	0.5	52.9	0.5	47.9	0.4	54.1	0.5	51.9	0.48
KNO_3 1 %	51.3	0.4	50.4	0.4	45.5	0.4	50.0	0.5	49.3	0.43
$KHPO_4$ 1 %	51.0	0.4	50.4	0.4	45.1	0.4	49.7	0.4	49.1	0.40
Dormex 2 %	48.1	0.3	48.3	0.4	40.4	0.3	47.3	0.3	46.0	0.33
Average	47.9	0.38	48.1	0.40	42.9	0.36	48.1	0.42		

New L .S.D at 0.05	Stem height		Stem diameters	
	(first season)	(second season)	(first season)	(second season)
Treatments	3.64	2.73	0.1	0.1
Media	2.07	2.14	N.S	N.S
TXM	4.13	4.22	N.S	N.S

Table 3. Effect of growing media and certain inorganic treatments on number of branches and number of leaves per *Casimiroa* seedling/during (2002/3 and 2003/4, seasons)

Media	Peat + clay		Peat + Sand		Sand + clay		Peat + sand + clay		Average	
Treatments	No. of branches	No. of leaves	No. of branches	No. of leaves	No. of branches	No. of leaves	No. of branches	No. of leaves	No. of branches	No. of leaves
(First season)										
Control	1.0	6.1	1.0	7.2	1.0	6.0	1.0	6.0	1.00	6.33
$MgSo_4$ 5 %	1.1	11.0	1.2	12.0	1.0	11.0	2.0	11.0	1.33	11.25
KNO_3 1 %	1.0	9.0	1.0	9.4	1.0	9.0	1.0	9.0	1.00	9.10
$KHPO_4$ 1 %	1.0	9.0	1.0	9.0	1.0	8.1	1.0	8.0	1.00	8.53
Dormex 2 %	3.0	11.1	2.0	12.0	2.0	11.3	2.0	11.4	2.25	11.45
Average	1.42	9.24	1.24	9.92	1.20	9.08	1.40	9.08		
(Second season)										
Control	1.0	6.0	1.0	7.0	1.0	6.0	1.0	6.1	1.00	6.28
$MgSo_4$ 5 %	1.0	10.0	1.1	12.1	1.0	10.0	1.0	11.0	1.03	10.78
KNO_3 1 %	1.0	8.0	1.0	9.3	1.0	9.1	1.0	8.4	1.00	8.70
$KHPO_4$ 1 %	1.0	8.1	1.0	9.1	1.0	9.0	1.0	8.4	1.00	8.65
Dormex 2 %	2.1	10.0	2.0	12.4	2.0	10.5	2.0	11.3	2.03	11.05
Average	1.22	8.42	1.22	9.98	1.20	8.92	1.20	9.04		

New L .S.D at 0.05	No. of. branches / plant (first season)	No. of. branches / plant (second season)	No. of. leaves/ plant (first season)	No. of. leaves/ plant (second season)
Treatments	0.10	0.10	1.87	1.62
Media	N.S	N.S	0.20	0.10
TxM	N.S	N.S	1.77	1.54

Table 4. Effect of growing media and certain inorganic treatments on root length (cm) and number of roots per *Casimiroa* seedling/during (2002/3 and 2003/4, seasons).

Media	Peat + clay		Peat + Sand		Sand + clay		Peat + sand + clay		Average	
Treatments	Root length	No. of roots	Root length	No. of roots	Root length	No. of roots	Root length	No. of Roots	Root length	No. of roots
(First season)										
Control	22.7	14.0	23.4	14.2	20.0	13.0	22.9	14.1	22.3	13.8
$MgSo_4$ 5 %	23.8	17.1	24.6	17.9	21.9	14.1	23.6	15.6	23.5	16.4
KNO_3 1 %	23.1	16.2	23.7	17.0	21.2	14.0	23.0	15.4	22.8	15.7
$KHPO_4$ 1 %	23.2	16.5	23.8	17.0	21.2	14.2	23.4	15.6	22.9	15.8
Dormex 2 %	23.4	18.6	24.2	19.4	21.6	16.7	23.5	18.2	23.2	18.2
Average	23.2	16.5	23.9	17.1	21.2	14.4	23.3	15.8		
(Second season)										
Control	22.6	14.2	23.5	14.1	20.3	13.4	22.5	14.0	22.2	13.9
$MgSo_4$ 5 %	22.9	18.1	24.8	18.0	22.7	14.5	23.4	16.2	23.5	16.7
KNO_3 1 %	22.0	17.5	24.0	17.2	21.8	14.0	22.6	15.4	22.6	16.0
$KHPO_4$ 1 %	22.1	17.5	24.1	17.5	22.0	14.3	22.6	15.5	22.7	16.2
Dormex 2 %	22.7	19.0	24.2	19.0	22.5	15.8	23.1	18.7	23.1	18.1
Average	22.5	17.3	24.1	17.2	21.9	14.4	22.8	16.0		

New L .S.D at 0.05	Root length (cm) (first season)	(second season)	No. of. Roots/seedling (first season)	(second season)
Treatments	1.78	1.66	2.26	2.37
Media	1.16	1.07	1.07	1.13
TXM	2.52	2.39	3.21	3.18

Table 5. Effect of grafting method and scion source on percentage of success and scion growth of *Casimiroa* transplants during (2002/3 and 2003/4, seasons)

Method of grafting and Scion source	Success %	Scion/ bud cmergency period	Average No. of Leaves /graft	Scion Length (cm)	Scion Diameter (cm)	Av. Leaf area of scion $(cm)^2$	Av. No. of Shoots per graft
(first season)							
I- Shield Budding							
I. 1-Soft wood	69.2	24.0	4.5	26.5	0.4	38.28	2.0
I. 2 - Hard wood	52.7	28.5	3.2	22.4	0.4	38.16	2.0
II- Cleft grafting							
II. 1 - Soft wood	54.8	26.4	6.0	25.6	0.5	36.29	1.0
II. 2 - Hard wood	41.4	32.0	4.0	23.3	0.6	32.16	2.0
New L.S.D at 0.05	2.04	2.07	1.54	1.82	N.S	3.44	N.S
(second season)							
Shield budding							
Soft wood	72.4	23.0	6.1	25.3	0.4	40.67	2.0
Hard wood	49.6	29.1	3.0	23.0	0.4	36.70	2.0
Cleft grafting							
Soft wood	56.1	28.3	6.6	27.1	0.5	37.43	1.0
Hard wood	40.2	30.4	4.0	22.5	0.5	34.11	2.0
New L.S.D at 0.05	3.89	2.26	1.75	1.69	N.S	3.06	N.S