

Rosa damascena (1980) Mansour) Damascus Rose ((

(2005) Lee Young

13 - 12

7 - 6 (2002) Rao

pH (2001) Oschman (2007) Adachi

Tagetes erecta (2006)

(2006)

Zinnia elegans الزينيا / وعيدان (2008 و 2009) *asiaticus*

Ranunculus *Dahlia variabilis* (2009)

Iris *.hollandica*

ATP

(2008 ,Rodman) / 20 *Tagetes patula* (2003) Borch

(2004) Donglin .

NPK

(2001) Iersel James .*Scaevola aemula*المضاف إليهما السماد الفوسفاتي بالتركيزين 50 أو 100 *Begonia sp* والبيكونيا *Petunia hybrida* /بالمستويات 10 أو 20 أو 40 ملغم / لتر / الأصبص لنباتات الورد الشجيري ادى إلى زيادة الوزن
(Imaida) (2005).*Rosa damascena**Rosa damascena*

2009/4/10

3 - 2

.2009/4/12

/ /

(1)

30

7×3

50

50

.(1)

.()

36

.(500)

500

(3)

/ 40 20 0

21

,2009/5/12

(/ 1)

Growmore

.Growmore

(2)

L.S.D.

.(1990

) 0.05

.1

5.95	ds-m ⁻¹	
7.72		pH
669	1-	
247		
84		
10.01	1-	
218		
45	1-	
8.3		
201		

.Growmore

.2

Zn	Mo	Mn	Fe	Cu	B	K ₂ O	P ₂ O ₅	%20		
%0.05	%0.0005	%0.5	%0.1	%0.05	%0.02	%20	%20	%20	%5.9	%3.9

3

*

500	()		
7.1	7.1	-	pH
0.646	0.646	/	EC
291	289	/	TDS**
11	16		TSS***
270	360		
0.9917	0.9965	/	
58.6	70.8	/	
96.19	100	/	Ca ⁺⁺
29.1	26		Mg ⁺⁺
48	58		SO ₄ ⁻⁻
65	60		Cl ⁻
19.93	10.18		NO ₃ ⁻
3.8	8.1		N
0.0009	0.0009		P
1.9	1.9		K
0.02	0.02		Fe ⁺⁺
0.05	0.07		Zn ⁺⁺
0.016	0.03		Cu ⁺⁺
Nil	Nil		Mn ⁺⁺
Nil	Nil		B
1.63	1.60		Free chlorine

*

= TDS **

= TSS ***

-1

500

48.42

/ 40

69.65

20

(A-4)

$$\begin{aligned}
 & \frac{(B-4)}{P2 \times 500} \cdot 64.96 \\
 & \frac{(C-4)}{(A-4)} \cdot 75.69 \\
 & P3 \times \frac{(B-4)}{(C-4)} \cdot \frac{12.04}{12.88} \\
 & \frac{3.86}{40} \cdot \frac{20}{(A-4)} \cdot 3.65 \\
 & \frac{(C-4)}{(B-4)} \cdot 3.89 \cdot \frac{(B-4)}{P3 \times 500} \\
 & \frac{78.31}{40} \cdot \frac{100.25}{20} \cdot \frac{(A-4)}{(B-4)} \\
 & \frac{(B-4)}{P3 \times 500} \cdot 109.08 \cdot \frac{(C-4)}{(A-4)} \cdot 118.94 \\
 & \frac{(B-4)}{500} \cdot 83.04 \cdot \frac{(A-4)^2}{40} \cdot 89.38 \\
 & \frac{(C-4)^2}{(A-4)} \cdot 97.75 \cdot P3 \\
 & 457.2 \cdot \frac{465.5}{40} \cdot \frac{(B-4)^2}{P3 \times 500} \\
 & \frac{(C-4)^2}{(A-4)} \cdot 486.7 \\
 & 15.50 \cdot \frac{(A-4)}{40} \cdot 11.83 \\
 & \frac{(B-4)}{(A-4)} \cdot 15.83
 \end{aligned}$$

P3 × 500

(C-4) 17.87

.4

Rosa damascena

:A

%K	%P	%N	()	(² /)	(²)	/	()	()		
1.79	2.42	1.21	11.83	426.3	68.77	78.77	2.79	11.42	48.42	
2.26	2.92	1.83	15.50	456.5	89.38	100.25	3.86	10.90	69.65	500
0.08	0.07	0.07	0.21	10.3	1.68	1.40	0.30	n.s.	1.69	L.S.D. 0.05

:B

1.53	2.12	0.90	12.57	416.0	72.88	75.15	3.32	8.54	48.75	(/ 0) P1
2.12	2.89	1.40	14.44	438.2	79.25	86.19	3.65	12.04	62.44	(/ 20) P2
2.47	3.03	1.61	15.83	457.2	83.04	109.08	3.31	11.77	64.96	(/ 40) P3
0.06	0.09	0.05	0.19	7.6	1.26	1.66	0.16	0.47	0.99	L.S.D. 0.05

B × A :C

1.26	2.01	0.81	9.86	421.3	71.75	67.88	2.93	8.75	40.69	P1	500
1.93	2.66	1.38	12.48	418.6	65.25	68.50	2.99	12.63	51.12	P2	
2.19	2.59	1.44	13.15	439.1	69.31	98.56	2.44	12.88	53.44	P3	
1.72	2.29	1.09	13.46	445.0	78.38	82.31	3.49	8.75	75.81	P1	500
2.36	3.14	2.03	15.16	464.9	92.00	99.50	4.20	12.50	75.69	P2	
2.70	3.33	2.36	17.87	486.7	97.75	118.94	3.89	11.44	75.44	P3	
0.11	0.14	0.10	0.32	11.4	2.34	2.66	0.36	0.82	2.11	L.S.D. 0.05	

P3 × 500

.(C-5) 9.63

.5

Rosa damascena

:A

()	()	()	()	/	
21.90	6.98	6.77	8.91	4.90	
25.98	11.44	9.13	12.35	6.73	500
0.71	0.50	0.26	0.29	0.44	L.S.D. 0.05

:B

23.44	9.90	8.02	10.45	5.98	P1
26.48	10.25	8.83	11.35	6.75	P2
29.40	10.06	8.83	12.45	6.71	P3
0.61	n.s.	0.39	0.27	0.40	L.S.D. 0.05

B × A :C

19.75	6.94	6.56	8.79	4.75	P1	
20.44	7.44	7.44	8.58	4.94	P2	
25.50	6.56	6.31	9.36	5.00	P3	
23.81	10.38	8.25	10.69	6.06	P1	500
25.00	11.25	9.50	12.89	6.94	P2	
29.12	12.69	9.63	13.48	7.19	P3	
1.07	0.75	0.60	0.47	0.68	L.S.D. 0.05	

(A-5)

6.98

11.44

.(B-5)

			12.69	P3 × 500	
					(A-5) / 40
P3 × 500	(B-5)		29.40		
					29.12
		(A-4)			<i>Rosa damascena</i>
				(A-5)	

(2003 ,Eristkea)

CaCO₃

(1996 ,)

B-4)

(3

(B-5

DNA

(2008 ,Radman)

(1997 ,)

(1996)

Humman
C/N

.1997 .

.49-41 :(1) 28

Agrotonic

.2006 .

-

-

.2006 .

-

-

.1990 .

.2008 .

Dahlia variabilis

-151 : (3) 8

. *Ranunculus asiaticus*

.161

.2009 .

Dahlia

. *Ranunculus asiaticus*

variabilis

.282-272 : (1) 7

.2009 .

.76-64 :36

.1996 .

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RESPONSE OF *Rosa damascena* TO MAGNETIZED WATER AND PHOSPHORUS FERTILIZATION .

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ABSTRACT

An experiment on the effect of magnetized water and phosphorus fertilization on vegetative growth and flowering of *Rosa damascena* was carried out from April 2009 to Nov. 2009. Regular or magnetized water with 500 gauss of magnetic field were used in plants irrigation. Phosphorus levels tested were 0, 20 or 40 g/l. Results could be summarized as follows:

Magnetized water improved the growth and flowering of plants. Plant height 69.65 cm , branch diameter 3.86 cm , Number of leaves/plant 100.25, leaves area 89.38 cm², chlorophyll content 465.5 mg/m², vegetative dry weight 15.50 g, percentages of N , P , K were 1.83%, 2.92%, 2.26% respectively. Number of flower/plant (6.73), flower diameter (12.8 cm), flowering period (9.13 day), vase life (11.44 day) and flowers dry weight (25.98 g) were increased as well.

Phosphorus at 20 g/l was more effective on increasing no. of branches/plant (12.04), branch diameter (3.65 cm), no. of flowers/plant (6.75) and vase life (10.25 day). While 40 g/l was superior on enhancing plant height (64.96 cm), no. of leaves/plant (109.08), leaves area (83.04 cm²), chlorophyll content (458.2 mg/m²), dry weight (15.83 g), N% (1.61), P% (3.03), K% (2.47), flower diameter (12.45 cm) and dry weight (29.40 g) as well.