

# IBA

## *Rosa damascena*

(1) (1) (1)

(IBA)

0) :

4000 2000 1000 ( )  
( + )  
20) %76 2000  
( + ) ( 13  
( 11 19) %72

:

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30621 . . (1)

## Effect of IBA Auxin and Rooting Media on Rooting of the Stem Cuttings of *Rosa damascena*

T. Al-Semaan<sup>(1)</sup>; N. Al-Batal<sup>(1)</sup>  
and Kh. Al-Maarri<sup>(1)</sup>

### ABSTRACT

This study aimed to investigate Four levels of IBA concentration: (0 (control), 1000, 2000, 4000 ppm) and three kinds of rooting media: sand, peatmoss, sand+sawdust in ratio of 1:1 in a factorial complete random design. The results indicated that the concentration of 2000 ppm was superior at rooting percentage 76%, root number (20 roots) and root length 13 cm over the other levels of concentration. Besides, the media of (Sand+Sawdust) was superior at rooting percentage 72%, rooting number (19 roots), root length 11 cm, physical and chemical characteristics and the characteristics of the rooted cuttings.

**Key words:** *Rosa damascena*, Propagation, Stem cuttings, Rooting media, Auxin, Concentrations.

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<sup>(1)</sup>Department of Horticulture, Faculty of Agriculture, Damascus University, P.O.Box 30621, Syria.

*Rosaceae*

*Rosa damascena*

*Rosa*

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.(Bown, 2001)

.(Katzer, 2006)

*Rosa gallica* x*Rosa* :

*Rosa damascena*

(Katzer, 2003) *moschata*

.(Loubert, 2002)

(%1-0.1)

"Attar"

.(Coutiere, 2007)

.(Horn,1992; Nakkawatchara, 2001)

4000

IBA

1996

IBA

2005

Pati

2000

Pivetta

IBA

1986

IBA

2005

Younis & Riza

1000

IBA

(IBA)

: :

4

*R.d.trigintipetala*

+ ( ) : .1:1

(IBA) :

/ 0.5 :



(1)

( )

.%85-80

23-22

25 ( )

0 : (IBA)

1:1

+

4000 2000 1000 ( )

(Penlate)

:

/ 0.5

25

0.5

2-1

5 2-1

20

2008/10/1

20×20

2008/12/1



(2)

:

LSD

SPSS

2008/12/1

(%)

:

( )

( )

0.5

( )

Correlation Coefficients

105

: ) (1)  
 %72 (1:1  
 %1 %5  
 (1:1 : )

.(1996 )

2000 (1)

4000 1000  
 (IBA)  
 4000  
 2005 Pati Pivetta 1996  
 .1986 ( )

4000 1000  
 2005 A. Riza A. Younis

) 2000  
 ( %95 50 83)

.(1) .

(%) (1)  
 .(IBA)

	ppm (IBA)				
	4000	2000	1000		
b 59.5	50	83	55	50	
c 35	30	50	30	30	
a 72	66	95	54	73	+
	c 48.67	a 76	c 46.33	b 51	
%1		%5		LSD	
1.12		0.8			
0.95		0.72			
2.13		1.6			
2.03		1.5			

\*

(2)

(1:1 : )

(1:1 : )

.(Hartmann *et al.*, 2002)



IBA (3)  
: ) (1:1

IBA 2000  
20  
4000 1000

( )

(2) . 14.33  
IBA

4000

2000

2005

Pati

2008

Ndakidemi

Laubscher

(IBA)

(1:1 + )

2000

(2)



(2)

.(IBA)

	ppm (IBA)				
	4000	2000	1000		
b 16.25	17	19	14	15	
c 14.75	16	15	16	12	
a 19	15	26	19	16	+
	b 16	a 20	b 16.33	c 14.33	
<b>%1</b>	<b>%5</b>			<b>LSD</b>	
1.13	0.81				
1.30	0.98				
1.97	1.55				
1.94	1.45				

\*

(3)

(1:1 + )

( + ) .

(1:1 : )

.(Laubscher; Ndakidemi, 2008)

1000

2000

4000

7.5

.(3 ) .

2000

13  
IBA

2000

2005

Pati

...

IBA

2008 Ndakidemi Laubscher  
ppm 1000

.IBA ppm 1000

2000]

( 2000) [(1:1 + )  
%1

(3)

(IBA)

	ppm (IBA)				
	4000	2000	1000		
a 10.75	9	14	12	8	
b 8	9	10	8	5	
a 11	10	15	10	9	+
	b 9.33	a 13	b 10	c 7.33	
<b>%1</b>	<b>%5</b>			<b>LSD</b>	
1.003	0.71				
1.03	0.77				
2.30	1.73				
2.11	1.58				

\*

+ )

(4)

(

2000  
4000 1000

[(1:1 : ) × 2000] (4)

( ) (4)

.(IBA)

	ppm (IBA)				
	4000	2000	1000		
a 22.75	21	26	24	20	
b 20	21	22	20	17	
a 23	22	27	22	21	+
	b 21.33	a 25	b 22	c 19.33	
%1		%5		<b>LSD</b>	
1.05		0.82			
1.02		0.66			
2.03		1.95			
2.36		1.6			

\*

+ ) (5)

(

( ) (5)

.(IBA)

	ppm (IBA)				
	4000	2000	1000		
a 2.84	2.63	3.25	3	2.5	
b 2.5	2.625	2.75	2.5	2.13	
a 2.86	2.86	3.38	2.75	2.63	+
	b 2.74	a 3.16	b 2.75	b 2.42	
%1		%5		<b>LSD</b>	
0.13		0.1			
0.13		0.08			
2.25		0.24			
0.29		0.2			

\*

2000

[(1:1 : ) × 2000] (4)

(  
0.13 + ) (6)

%92.5

<sup>3</sup> /  
(N, P, K)

. / 73

(6)

				EC	PH			
/	/	/	100/1	/ 10:1	10:1	%	<sup>3</sup> /	
164	90	177	0.038	0.81	6.91	72.1	0.68	
189	70	210	0.05	1.76	5.69	73.2	0.44	
73	175	1000	0.08	2.49	7.48	92.5	0.13	<sup>+</sup> 1:1

(7)

(7)

.%99

/	/	/	100/1	EC /	PH	%	<sup>3</sup> /	
0.043	0.556	0.201	0.396	0.1	0.133	0.486	-0.615	(%)
0.093	0.517	0.096	0.282	0.03	0.055	0.572	-0.704	( )
0.043	0.566	0.201	0.396	0.1	0.133	0.486	-0.641	( )
-0.134	0.582	0.291	0.461	0.39	0.339	0.271	-0.371	( )
-0.087	0.324	0.135	0.39	0.698	0.471	0.148	-0.277	( )

-0.03)

(0.704

0.471 0.39 0.339)

( 0698

.( 0.566 0.517 0.556 0.486 0.572 0.486)

( + )

(Aljibury *et*

*al.*, 1982)

( + )

(N, P, K)

.(Letey *et al.*, 1992)

.(Salter & Haworth, 1991)

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