

(*Tamarindus indica* L.)

(2011 / 3 / 14

2010 / 12 /21

)

Benzyladenine (BA)

(*Tamarindus indica* L.)

(2,4-D)

2,4

/

2.0,1.5,1.0, 0.5, 0.0

Naphthaleneacetic acid (NAA)

Dichlorophenoxyacetic acid

. / 2.0, 1.5, 1.0, 0.5, 0.0

Indolebutyric acid (IBA)

/ 1.0 (MS)

90

4.08

BA

/ 1.5

BA

MS

70

..... (*Tamarindus indica* L.)

(*Tamarindus indica* L.)

/ /

%96

(:) 2:1

(%6)

20-5

Arnon

(Arnon and Hogland, 1944)

° 2 + 27

8

16

8 -6

(Murashige and Skoog, 1962)

Dichlorophenoxyacetic (2,4-D) Benzyladenine (BA)

2,1.5 ,1.0 ,0.5,0.0 Indolebutyric acid (IBA) Naphthaleneacetic acid (NAA) acid

(pH)

4%

/

1

30-25

.5.8-5.6

MS

8

16

2000

°2±20

()

25

² 2

1

°2±20 / 1 NAA BA MS
 . 8 16 2000

(MS)
 %8-1 / 1 BA

(96%)
 .(1) 95% 15 () :1
 ()

(%)	(%)	()
95	90	5
60	85	10
5	95	15
0	10	20

/ 1 NAA BA (2)
 (2005 ,)
 .(Street, 1977)

MS

:2

/ 1 NAA BA

()		
50	+	
44	++	
20	++++	
35	+++	

+ ++ +++ ++++

1 / 1.0 BA MS 90
 BA) 4.02
 (BA) (1) (/

tRNA
 (1997 ,) DNA

(/ 2) NAA,BA

(3)

(Jaiwal *et al.*, 1998)

.(Neibaur *et al.*, 2008)

NAA IBA 2,4-D NAA
 (4)
 (5) 2,4-D NAA

IBA

.(2005, 2005 ,)

MS

:3

90

NAA BA

()					(/)	
2.0	1.5	1.0	0.5	0.0	BA	NAA
1.0 0.021±	1.151 0.121±	4.02 0.032±	2.321 0.023±	*	0.0	
0.93 0.031±	1.051 0.035±	2.022 0.022±	1.21 0.011±	0.021 0.010±	0.5	
0.54 0.073±	0.621 0.033±	1.023 0.072±	0.211 0.062±	0.082 0.02±	1.0	
0.032 0.016±	0.231 0.055±	0.211 0.073±	0.123 0.032±	0.022 0.013±	1.5	
*	0.110 0.01±	0.013 0.002±	0.033 0.010±	*	2.0	

±

*

MS

:4

90

2,4-D BA

()					(/)	
2.0	1.5	1.0	0.5	0.0	BA	2,4-D
0.962 0.123±	1.192 0.011±	4.018 0.131±	0.331 0.121±	*	0.0	
0.311 0.111±	0.611 0.121±	1.441 0.821±	0.623 0.024±	0.121 0.001±	0.5	
0.201 0.032±	0.602 0.041±	1.672 0.081±	0.921 0.072±	0.133 0.021±	1.0	
0.023 0.011±	0.103 0.023±	0.962 0.121±	0.321 0.021±	0.056 0.002±	1.5	
*	0.002 0.001±	0.401 0.112±	0.111 0.081±	0.002 0.001±	2.0	

±

*

.IBA, BA

MS

()					(/)
2.0	1.5	1.0	0.5	0.0	BA / IBA
0.966 0.031±	0.913 0.012±	4.04 0.021±	2.352 0.011±	*	0.0
0.64 0.023±	0.411 0.052±	1.021 0.033±	0.651 0.061±	0.113 0.021±	0.5
0.213 0.033±	0.411 0.044±	0.982 0.045±	0.311 0.031±	0.16 0.011±	1.0
0.211 0.023±	0.201 0.021±	0.311 0.031±	0.022 0.012±	0.13 0.066±	1.5
0.111 0.033±	0.04 0.004±	0.115 0.011±	0.006 0.001±	0.02 0.001±	2.0

±

*

BA

MS

%8-1

(1)

(3)

/ 1

MS

30

% 90

%3

Al-Khury and Al-Bahrany,)

(ATP)

(2002

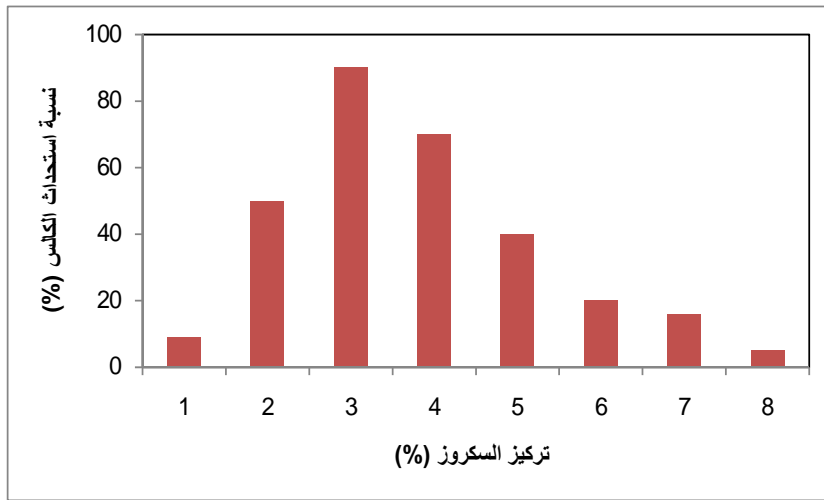
(2005 , Mohammadand and Abood,1990)

Al -Khury and Al-

.(Allchateeb, 2008 ; Bahrany, 2002

Javed and Ikram,)

.(2008



:1

30 BA / 1 MS

/ 1.5 BA
(2) 70

1997)

.(2009 ,



/ 1 BA (MS) :1

90



(MS) :2

70 / 1.5 BA

- (1997)
(*Lactuca sativa* L.)
- Amgdalus communis* L. (2005)
.112-110 (8) **16**
(2009)
.92-91 (2) **22** (*Nigella sativa* L.)
(2005)
.106-101 (1) **33** (*Gossypium hirsutum* L.)

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