

(2011 / 12/ 12 2011/ 10 /30)

60 30)

(³ 6 4 2)

(¹⁻ .

15

(5/25 5/10 4/25)

(R.C.B.D)

72

4

2011

¹⁻ . 60

¹⁻ . 30

.³ 6

:

Effect of Foliar Spray of Iron Cheleate and Acta Acro Fertilizers on Growth of *Pistacio vera* L. Seedling

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ABSTRACT

The research included study the effect of foliar spray of three concentrations (0, 30 and 60 mg.l⁻¹) of Iron element as Iron cheleat (Fe – EDDHA) and three concentrations (0, 2, 4 and 6 cm³) of Acta Agro fertilizer on growth and some vegetative characteristics of *pistacia vera* L. seedlings which grown in black poly ethylene bags filled with lomy soil, each treatment was applied three times at 25/4, 10/5, 25/5 /2011. A complete randomized block design (R.C.B.D) with three replicates each consisted of 4 seedlings was used to carry out this research. Data collected at the end of September 2011 indicated that, foliar spray of Iron element at 60 mg.l⁻¹ resulted in a significant increase in both parameters, seedlings high and percentage chlorophyll pigment as compared with control treatment. Mean while spray of Iron element at 30 mg.l⁻¹. led to the most significant increase in seedlings high. At the same time, application of Acta Agro fertilizer at 6 cm³.l⁻¹ gave the highest increase in total number of leaves per plant, single leaf area and leaf area per seedling. None of treatments had a significant effect on the fresh and dry weight and percentage of dry matter of leaves as compared with control.

Keywords: Seedling , *Pistacia vrea*, Iron cheleat, foliar spray, Acta Agro.

Pistacia vera L.

(7-6)

3-2

.(2000)

)

Porphyrin

(2003

.....

(2011)

”

Fe-EDTA Fe-EDDHA
(2006)

(2010) (2000) El-Shazly (1995) Atawia Awad
(2011) (2010) Al-Bamarny

RNA)

(Tize and Zeiger, 2003;

(DNA

%2 (2011) Whdan (Havlin *et al.*, 2005

”

(Havlin *et al.*, 2005)

(2002) Hegazi (2003)

¹⁻.P 37,71

(Carl, 2005)

(2003)

(2004) Ben Mimoun (Garcia, 2004)

”

” ”

Mahnaz (Kessel , 2006)

200

(2010)

1-

/

/

2011

(³ 6 4 2)

(¹⁻ . 60 30)

)

(4-3

15

30-25

35

15

10

.(1)

:1

53,7	pH	55,462	(¹⁻ .)
30,97	(¹⁻ .)	55,306	(¹⁻ .)
00,49	(¹⁻ .)	90,230	(¹⁻ .)
00,22	(¹⁻ .)		
00,130	(¹⁻ .)	10,17	(¹⁻ .)
29,31	(¹⁻ .)	456,1	(¹⁻ .)EC

/

/

*

(Fe- Fe-EDDHA

%6

Ethylene diamine di (o-hydroxy phenyl acetic acid))

.(2)

%7,0	
%6,0	
%0,3	
%0,7	
%21,0	
%1,0	K₂O
%0,2	
%7	

: 2

5/3 1

(R.C.B.D)

4

2011

72

(Vernier) ()

()

(2001)

(1984) Patton (²) /

× = : (/²)

SPAD) (Saieed, 1990)

() (Felixloh and Bassuk, 2000) (Chlorophyll meter – 520

10 () (Agha *et al.*, 1994)

° 70 (Oven)

() 72

(2008) %100

(SAS, 1996) SAS

.0,05

1- . 60 (3)
 26,73 " " " "
 1- . 30
 3 6 1,72
 " "

.(² 1653,70 ² 38,41 43,00)
 (2010) Al-Bamarny (2004)
 (2011)
 (2010) Hassan (2000) Saeed
 (2011) Abd El-Razek (2011) Mohamed
 ()

:3

(²)	(²)	(/)	()	()	
772,10 b	30,58 b	25,81 c	1,03 b	15,38 b	
1405,30 a	35,13 ab	39,68 ab	1,72 a	22,71 ab	¹⁻ . 30
1165,70 ab	36,14 ab	31,66 bc	1,25 b	26,73 a	¹⁻ . 60
748,80 b	31,61 b	23,60 c	1,41 ab	18,30 ab	³ 2
1142,70 ab	38,22 a	29,96 bc	1,30 ab	16,23 b	³ 4
1653,70 a	38,41 a	43,00 a	1,25 b	20,34 ab	³ 6

%5

*

.....

(4)

1- . 60

0,87 60,78

3 6

1- . 30

(4,81 10,99)

Bohorquez .%43,96

(2010)

Al-Bamarny

(2010)

(2001)

(2002)

Hegazi

(2011) Aly Shereen

(2009)

(2011)

:4

(%)	()	()	()		
43,91 a	4,22 a	9,62 a	0,60 ab	51,31 c	
43,96 a	4,21 a	9,57 a	0,58 ab	55,06 bc	1- . 30
39,68 a	4,00 a	10,06 a	0,87 a	60,78 a	1- . 60
40,92 a	3,70 a	8,95 a	0,78 ab	56,56 a - c	3 2
43,82 a	4,75 a	10,75 a	0,54 ab	59,68 ab	3 4
43,10 a	4,81 a	10,99 a	0,47 b	59,42 ab	3 6

%5

*

(2003)
 γ-aminolivulinic acid Glutamate
 Protochlorophyllid Mg- Protoporphyrin 1x methyl ester
 (2011)
 Cytochrome oxidase Peroxidase Catalase
 .(Havlin *et al.*, 2005)

()

(Dong *et al.* , 2002)

Porphyrins

(Havlin *et al.*, 2005)

(IAA)

(Singh ,2003)

(2003)

(Carl , 2005)

(IAA)

(2003)

(1989)

.(Mengel and Kirkby, 2001)

.....

3 6 1- . 60

.(2011)

.(2011)

.(2004)

NPK

.(2009)

. *Prunus armeniaca* L.

.(2006)

".(1989)

Prunus armeniaca L .

.(2008)

".(2011)

".(2003)

Pistacia .(2000)
 .9-5 (1)32 . .vera L.
 .(2001)
 . 162 – 155 : 28 – 24 . .
 .(2003)
 KT-30 .(2010)
 (2) 2 . *Vitis vinifera* L.
 .137- 123

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