

### Seamino

(2011 / 9/ 26 2011/ 6 /13 )

Seamino

/ /  
6

. / (4.0 2.0)  
b a

/ (4.0 2.0)

. / (2.0)  
6

. Seamino :

## **Effect of the Different Seaweed Extract (Seamino) Concentrations on Growth and Seed Chemical Composition of Two Wheat Varieties**

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### **ABSTRACT**

This study conducted at Biology department/ Education college/ Mosul University aiming to evaluate the effect of spraying the shoot parts of two wheat cultivars (Um Rabee and Sham 6) by two Seaweed extracts (Seamino) concentrations (2.0 and 4.0) ml /L at three different stages of growth.

The results of this study showed a significant increase in concentration of chlorophyll a and b in the leave tissues and the Ca, Mg and K content of the cultivated grains during spraying the shoot with (2.0 and 4.0) ml /L seamino; More over, there was a significant increase in plant length, the relative water content and flare leaf area, but there was a non significant increase in the carbohydrate and protein of the cultivated grains at (2.0) ml/L seaweed extract.

The cultivated Sham 6 dominated the cultivated Um Rabee in most parameters studied.

**Key word:** Seaweed, Seamino, Wheat.

.(Crouch,1990 )

E   B1, B2,C,

.(Moor and Van Staden, 1986) ABA

,GAs , cytokinins , Auxins

.....

(Yan, 1993 ; Nabati *et al.*,

. 1991)

N Mg

Cu Zn Mo Bo Co

photosynthesis

(O'Dell, 2003)

.(Jensen, 2004)

:

6

2007-2006

:

30

/

2

/

/

(EC)

( Black and Hartge, 1986)

(pH)

.(Richard, 1954)

Flame photometer

.(1)

,(Black,1965)

:1

32.0	(%)	1
38.8	(%)	2
29.2	(%)	3
		4
1.30	(%)	5
0.75	/ (E.C)	6
7.42	(pH)	7
	/	8
0.8 0.63 1.4 0.66 1.7	Cl <sup>-</sup> Na <sup>+</sup> K <sup>+</sup> Mg <sup>+2</sup> Ca <sup>+2</sup>	

:

(100)

:

- =

$$100 \times = (100)$$

:

6

) Seamino

/ (4.0 2.0)

.....

LEILI

Amino K<sub>2</sub>O=8% P<sub>2</sub>O<sub>5</sub>= 4% N=3%  
( /

AGROCHEMISTRY CO., LTD  
Seaweed Extract =18% acid =10%  
3

3 - 2

(Large, 1954)

:

(5) (20) / (15) 2010/12/22  
(23)

(10) (%75)

(5)

70

b a

.2011 /5/20

:

(<sup>2</sup> )

( )

. (Kemp, 1960)

0.905 x

x

=

: (Turner, 1981 )

—

100 ×

= (%)

—

:

(Arnon, 1949 ; Makinny, 1941)

( )

(20)

200

(Hettich EBA )

(%80)

(645-663)

35

(Spectrophotometer/cam)

.(A , B )

Chl.a = (12.7 (D 663) - 2.69(D 645)) × V/(1000×W).

Chl.b = (22.9(D645) - 4.68(D 663)) × V/(1000×W).

645 663

=D

.(% 80)

=V

=W

:

(10)

(Herbert *et al.*, 1971)

Hettich )

-

(EBA35

(488)

:

(Schacterale and Pollak, 1973)

(650)

:

(0.5)

Na<sup>+</sup>

K<sup>+</sup>

(Chapman and Partt, 1961)

.....

Mg<sup>2+</sup>

Ca<sup>+2</sup>

(Flam Photometer)

.(Richard, 1954 )

:

( 1990 )

Completely Randomized Design (C.R.D)

Duncan's New

.( Duncan, 1955) Multiple Range Test

(2)

/ 4

Seamino

/ 2

(O'Dell, 2003)

(Nelson and Van Staden, 1984)

( Gollan and Wriqth, 2006)

(6 )

.(2009 )

( )

Seamino

:2

		%			2 /			/		
48.739 b	55.259 a	53.000 bc	23.023 b	20.467 b	23.355 b	67.650 ab	65.669 b	65.647 ab		
52.618 b		56.297 b	26.888 ab		18.127 b	65.150 b		63.900 b	Seamino 2ml / L	
63.349 a		56.480 b	28.775 a		19.919 b	68.710 a		67.460 ab	Seamino 4ml / L	
	54.545 a	44.478 d		31.990 a	22.691 b		68.671 a	69.653 a		6
		48.939 cd			35.648 a			66.400 ab	Seamino 2ml / L	
		70.217 a			37.630 a			69.960 a	Seamino 4ml / L	

(5%)



**Seamino**

/ (4 2)

b a

(3)

.(1989 , ) .

a

**Seamino**

:3

( / ) b

		<b>b</b>			<b>a</b>		
0.524 c	0.618 b	0.555 c	1.435 b	1.889 a	1.363 b		6
0.718 b		0.555 c	2.076 a		2.110 a	Seamino 2ml / L	
0.833 a		0.743 b	2.109 a		2.183 a	Seamino 4ml / L	
	0.766 a	0.493 c		1.859 a	1.506 b		6
		0.882 a			2.035 a	Seamino 2ml / L	
		0.922 a			2.035 a	Seamino 4ml / L	

(5%)

(4)

/ (4 2)

/ (4)

(Sheekh and Saied, 2000)

.(2009 )

(Sivasankari, 2006)

(Staden *et al.*, 1994)

b

( )

(6 )

Seamino

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( / )

4.108 a	4.675 a	4.640 a	55.779 a	48.554 b	47.785 c		6
4.211 a		4.681 a	53.580 a		48.632 c	Seamino 2ml / L	
4.234 a		4.705 a	58.364 a		49.244 c	Seamino 4ml / L	
	3.693 b	3.575 b		63.262 a	63.773 ab		
		3.740 b			58.528 b	Seamino 2ml / L	
		3.764 b			67.484 a	Seamino 4ml / L	

(5%)

:

(6 5)

/ (4 2)

.(Rathore *et al.*, 2008) (Mancuse *et al.*, 2006)

.(Polat *et al.*, 2008)

.(2009 , ) (Jensen , 2004)

.....

/ ( 4 2)

.(2000 , )

(6 )

( )

( ) ( 6 )

)

**Seamino**

.(1989

Seamino

:5

(%)

2.183 b	2.496 a	2.087 b	2.375 b	2.583 a	2.450 bc		
2.705 a		2.460 b	2.800 a		2.600 bc	Seamino 2ml / L	
2.940 a		2.940 a	2.967 a		2.700 abc	Seamino 4ml / L	
	2.723 a	2.280 b		2.844 a	2.300 c		6
		2.950 a			3.000 ab	Seamino 2ml / L	
		2.940 a			3.233 a	Seamino 4ml / L	

(5%)

Seamino

:6

(%)

3.219 c	3.550 a	3.166 c	1.192 a	1.253 a	1.359 a		
3.579 b		3.559 b	0.872 b		1.237 b	Seamino 2ml / L	
3.958 a		3.927 a	0.842 b		1.176 b	Seamino 4ml / L	
	3.620 a	3.273 c		0.679 b	1.024 c		6
		3.600 b			0.507 d	Seamino 2ml / L	
		3.988 a			0.508 d	Seamino 4ml / L	

(5%)

.(2009)

.(*Rosemarinus officinalis L.*)

.(1990)

.(1989)

Soluamine Algamix

.(2009)

,*Triticum durum L.*

.(1989)

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