

**. (Cucumis sativus L.)**

**	**	*			
harith_b76@yahoo.com.	-	-	-	-	*
	-	-	-	-	**
/					
	( Lelli 2000	Viviter	2012	Protec	Giant
	Split Plot				( Summit
			R.C.B.D.		Maxeem)
					Viviter
2148.87	87.604	39.850			
		Giant			%3.428
				Protec	
		Maxeem			
				Summit	
	Maxeem			Viviter	
					Summit
					Maxeem
					Summit
	Maxeem	Protec			Lelli 2000
	Maxeem				Giant
					Viviter
					2254.01
					:

Cucurbitaceae )

(Cucumis sativus L.) cucumber

(

( 1989 )

P Ca

( 1980 )

B2 B1 C

K

تاريخ استلام البحث 2013 / 6 / 26  
 تاريخ قبول النشر 2013 / 10 / 20

Sweet ( 1988 ) ( 2003 ) tale  
Sweet tale  
( 2004 )  
( 2005 )  
US  
" )  
Elia) Organic Nutrition ( 1998  
Natural compounds )  
Abo Arab ) ( 1998  
0.75 0.5) ( 2006) Bayoumi / ( 1.0  
45 / 0.5  
/ 1.5 ( 2009)  
) Seaforcel / 2.5 Seamino  
. Babylon ( ( 2011 )  
3 / 3 Alga 600 /  
) ALGATON  
. (

9 - 50 - 2012 - 3.50  
 Solar ( *Cucumis sativus* L.)  
 60 2.5 . Pasteurization of Soil  
 16 40 3 1  
 2012 / 1 / 10  
 200  
 . ( 1988 )  
 :  
 Split plot  
 Sub plot ( R. C. B. D. ) Main plot  
 : -1  
 Mcavet Maxeem-  
 Nickerson-zwaan Summit-  
 : -2  
 1 / 1 Giant -  
 1 / 3 Protec-  
 1 / 3 Viviter-  
 1 / 3 Lelli 2000-  
 -  
 ( 2001 ) SAS 0.05  
 15 22  
 :

.1

Lelli 2000		Viviter		Protec		Giant	
N	9%	Potassium (K <sub>2</sub> O)	7% w/v	Potassium (K <sub>2</sub> O)	7.2% w/v	Potassium (K <sub>2</sub> O)	55% w/v
Potassium (K <sub>2</sub> O)	6%	Phosphore (P <sub>2</sub> O <sub>5</sub> )	6% w/v	Calcium (cao)	3.36% w/v	Phosphore (P <sub>2</sub> O <sub>5</sub> )	45% w/v
Phosphore (P <sub>2</sub> O <sub>5</sub> )	3%	N	5%	Total Humic Extract	12% w/v	Mono carboxylic acid	
Chelate Microelement	4%	C	7%	Humic acid	9.6% w/v	Multi carboxylic acid	
Natural PGR		CIFO S.P.A  Blue Field		Folvic acid	2.4% w/v	Folvic acid	
Vitamines				TCI S.A		Polys a ccharids Auxines Cytokinines Vitamines	
Amini acid							
Betaine							
Leili Agrochemistry							

:

2012/4/2

-:

502Chlorophyll meter

- - 1

SPAD

-5 . ( / )      -4 . ( )      -3 . ( )      -2  
) T.S.S. -8 . ( <sup>2</sup> / )      -7 . ( )      -6 . ( )  
. ( %

.2

( / )	( / )	O.M ( / )	E.C (ds.m <sup>-1</sup> )	K ( / )	P ( / )	( . )	( . )	pH	( / ) ( )	( / ) ( )	( / ) ( )	
8	160	10	3.30	3.9	14.4	16.5	11.2	7.03	300	140	560	

Viviter

( 3 )

Giant

. 35.373

)

(



. ( ) .4

	Lelli2000	Viviter	Protec	Giant	Control	
16.315 a	15.956 ab	16.794 a	16.500 ab	16.743 a	15.583 bc	maxeem
14.216 b	14.333 d	14.338 d	14.211 d	14.600 cd	13.600 d	Summit
	15.144 ab	15.566 a	15.355 ab	15.671 a	14.591 b	

.05

Protec

( 5 )

Lelli 2000 Viviter Giant

. ( 2004 Jensen )

Summit

28.752

Maxeem

Summit  
Maxeem

Lelli 2000  
Giant

26.389

. ( ) .5

	Lelli2000	Viviter	Protec	Giant	Control	
27.204 b	26.923 bc	27.990 abc	27.989 abc	26.389 c	26.729 c	maxeem
28.752 a	29.783 a	28.113 abc	28.853 ab	29.561 a	27.453 bc	Summit
	28.353 ab	28.051 ab	28.421 a	27.975 ab	27.091 b	

.05

Protec

( 6 )

/ 24.866

/

/ 20.143

( 1990 ) Crouch ) /  
 %26.71 Maxeem  
 Summit

Maxeem Giant / 28.403  
 Summit Viviter / 17.002  
 Summit Lelli 2000 Protec Giant  
 . ( / ) .6

	Lelli2000	Viviter	Protec	Giant	Control	
26.431 a	27.530 ab	24.901 abc	28.041 a	28.403 a	23.284 abc	maxeem
20.859 b	20.976 cd	24.162 abc	21.692 bcd	20.466 cd	17.002 d	Summit
	24.253 a	24.531 a	24.866 a	24.434 a	20.143 b	

. 0.05

Viviter ( 7 )  
 %16.96 %10.19 %7.14 %6.20  
 Giant Protec Lelli 2000  
 74.895

Giant

( 2010 )  
 %6.37 Summit  
 Summit Viviter

Maxeem

71.627 Maxeem  
 . Maxeem Giant Maxeem

. ( ) .7

	Lelli2000	Viviter	Protec	Giant	Control	
78.416 b	80.859 ab	87.135 a	80.383 ab	72.078 c	71.627 c	maxeem
83.886 a	84.112 ab	88.073 a	82.992 ab	86.093 ab	78.163 bc	Summit
	82.485 b	87.604 a	81.687 b	79.085 bc	74.895 c	

. 0.05

( 8 )

1498.34

. ( 6 )

Summit  
Maxeem

Maxeem  
Summit

Protec  
/ 2254.01  
Viviter  
/ 1392

. ( ) .8

	Lelli2000	Viviter	Protec	Giant	Control	
2072.95 a	2226.04 a	2169.74 ab	2254.01 a	2047.23 abcd	1667.76 de	maxeem
1756.69 a	1764.33 cd	2128.01 abc	1800.26 bcd	1761.97 bcd	1328.92 e	Summit
	1995.18 a	2148.87 a	2027.13 a	1904.60 a	1498.34 b	

%5

( 9 )

Protec 7.125 6.352

( 10 ) ( T.S.S. )

Summit  
Protec Giant  
Maxeem Protec Maxeem



5.929

. Summit Lelli 2000 Viviter

. ( <sup>2</sup> / )

.9

	Lelli2000	Viviter	Protec	Giant	Control	
6.405 a	6.467 bc	6.544 bc	5.929 c	6.288 bc	6.800 ab	maxeem
6.842 a	6.775 bc	6.413 bc	6.775 ab	6.800 ab	7.450 a	Summit
	6.621 b	6.478 b	6.352 b	6.544 b	7.125 a	

\*

. 0.05

Viviter

( 10 )

Lelli Protec Giant

2000

3.456

Maxeem

Viviter

%2.957

Maxeem

Summit

. ( % ) T.S.S.

.10

	Lelli2000	Viviter	Protec	Giant	Control	
3.159 a	3.100 ab	3.456 a	3.057 ab	3.225 ab	2.957 b	maxeem
3.297 a	3.338 ab	3.400 ab	3.288 ab	3.350 ab	3.113 ab	Summit
	3.219 ab	3.428 a	3.172 ab	3.287 ab	3.035 b	

\*

. 0.05

- 1980 .  
2011 .  
*Cucumis* ) . ( *sativus* L.  
2009 .  
( *Cucumis sativus* L.)  
*Cucumis* ) . 2005 .  
( *sativus* L.  
2010 .  
( *Cucumis melo* )  
2003 .  
34 ( 1 ) : 47 - 53 .  
1988 .  
279 .  
1988 .  
2004 .  
( *Cucumis sativus* L.)  
1985 .  
1989 .
- Abo- Arab, R.B., R.M.Helal and Y.A. AL-Aidy .1998.Bioresidual activity of certain oils and plant extraction some stored grain insects in relation on with quietly of wheat grain –*J. Agric .Sci – Mansoura.Univ.*,23 :5641 -5653.
- Bayoumi , Y. A. and Y.M.Hafes .2006 . Effect of Organic Fertilizer Compound with Benzo (1,2,3) Thiadia Zole- 7- Carbothioic Acid S-Methyl Ester (BTH) on the Cucumber powdery Mildew and the yield production, Department of Horticulture (Vegetable) Faculty of Agriculture , Kafer - AL- Sheikh University Egypt. <http://WWW.sci.a.szeged.Hu/ABS>.

- Crouch , I. J. , R. P. Bekett and J. Van Staden . 1990 . Effect of seaweed concentrate on the growth and mineral stressed lettuce . *Jor. of Applied phcology* . 2:269-272 .
- Jensen , E. 2004 . Seaweed fact or fancy . from the organic broad caster , published by moses the Midwest organic and sustainable education . 12(3):164-0170 .
- Elia ,A. , P. Santamaria and F. Serio . 1998 . Nitrogen nutrition , yield and quality of Spinach . *J . Sci.Food Agric* ,76 :341 –346 .
- SAS. 2001. Users Guide , Statistics ( Version 6.121 ) SAS . Inst . Cary , N. C. U.S.A.

## THE EFFECT SPRAYING NUTRITION SOLUTION ON TOTAL YIELD OF TWO CUCUMBER HYBRID ( *Cucumis sativus* L. ).

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### ABSTRACT

The field experiment was conducted in plastic house of Horticulture and landscape design department at the season 2012 to study the effect of five foliar nutrition treatments ( Control , Giant , Protec , Viviter , and Lelli 2000 ) with two kind of hybrids ( Summit , Maxeem ) . Split plot design was used and distributed as R.C.B.D. . It was done with three replicates . The results showed that Viviter had superior significant in total chlorophyll content , Fruit weight , Plant yield , Total soluble solids so it gave higher rate reached 39.850 , 87.604 gm , 2148.87 gm , and 3.428% successively . Giant had superiority in fruit length , while Protec had superiority in fruit diameter , fruit numbers . While the control gave increasing in fruit hardness . Maxeem showed significant superiority in fruit length and fruit numbers while Summit had significant increasing in fruit diameter , fruit weight . The interaction between Viviter and Maxeem significant increasing in leaf chlorophyll content , fruit length , T.S.S. , while the interaction Lelli 2000 with summit had superiority in fruit diameter only . The interaction between Giant and Maxeem had significant superiority in fruit number while the interaction between Viviter and Summit had significant superiority in fruit weight . The significant superiority of plant yield was the interaction between Protec and Maxeem so it gave higher rate reached 2254.01 gm while the Control of Maxeem showed superiority in fruit hardness .

**Key words** : Nutrition solution , Hybrids , Cucumber