

(Giza 2 cultivar) and lentil (Giza 370) under field condition was studied. Results in Table (16) show that seed treatment with any of T. harzianum, or B. subtilis or Streptomyces sp gave the highest percentage of survival plants of lupine followed by broad bean as compared with the control and Rhizolex T. Also, the same treatments gave the highest increase in seed weight, yield per feddan for broad bean followed by lupine compared with control (untreated seeds). On the other hand, seed treatment of broad bean and lupine with T. harzianum or B. subtilis resulted in an increase in seeds weight and yield per feddan more than those obtained by seed treatment with Rhizolex T. Generally, it was clear that seed treatment of broad bean and lupine, with T. harzianum or B. subtilis may have a role in increasing percentage of survival plant and yield components compared with the fungicide Rhizolex T. and untreated seeds under field conditions. On the other hand there was no role for them on chickpea and lentil. (As shown in Fig 11 a and 11 b)

% Healthy plants (survivals)
 X. weight of seeds/plant gm.

D- Lupine cv Giza 2

B- Broad bean cv Giza 2

E- Lentil cv Giza 370

C- Chickpea cv Giza 2

A- Broad bean cv Giza 402

T.harz- B.subt- Rizol- Contr-

T.harz- B.sub- Strep- Rizol- Contr-

T.harz- B.sub- Strep- Rizol- Contr-

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Fig. (11a) Effect of seed treatment with antagonistic microorganisms compared with Rizolox T. on survival plants and yield components of some leguminous crops under field conditions.

(Season 1986 -- 1987)

Table (16) Effect of seed treatment with antagonistic microorganisms compared with Rizolex T. on survival plants and yield components of some leguminous crops under field conditions.
(Season 1986 - 1987)

Antagonistic microorganisms	Healthy plants	M. weight of seeds per plant	M. yield per plot per feddan KG.	M. yield per feddan KG.	% Of (+) or (-) of yield than control/	
CVS	%				+	-
<u>Trichoderma harzianum</u>						
Broad bean (Giza 402)	82.2	27.8	2.085.0	834.0	21.9	
Broad bean (Giza 2)	77.0	31.6	2.210.6	884.2	9.5	
Chickpea (Giza 2)	50.5	5.6	0.343.9	137.6		8.8
Lupin (Giza 2)	95.9	9.7	0.552.6	261.0	8.7	
Lentil (Giza 370)	77.0	1.2	0.593.7	237.5		21.2
<u>Bacillus subtilis</u>						
Broad bean (Giza 402)	77.3	26.6	1.836.9	734.6	11.4	
Broad bean (Giza 2)	72.9	23.5	1.693.8	677.5		18.1
Chickpea (Giza 2)	63.9	8.5	0.348.9	139.6		8.1
Lupin (Giza 2)	93.1	11.3	0.756.8	302.7	21.2	
Lentil (Giza 370)	79.8	1.5	0.479.8	191.9		49.6
<u>Streptomyces sp</u>						
Broad bean (Giza 402)	74.9	23.0	1.637.6	655.0	5.9	
Broad bean (Giza 2)	72.1	30.8	1.944.7	777.9		2.8
Chickpea (Giza 2)	68.9	8.4	0.370.5	146.2		1.8
Lupin (Giza 2)	89.1	9.1	0.569.0	227.6		4.8
Lentil (Giza 370)	76.1	1.3	0.664.6	265.8		8.1
<u>Fungicide Rizolex, T.</u>						
Broad bean (Giza 402)	80.4	25.9	1.838.9	735.6	11.5	
Broad bean (Giza 2)	85.8	26.5	2.086.1	834.4	4.1	
Chickpea (Giza 2)	64.3	8.0	0.323.2	129.3		16.6
Lupin (Giza 2)	86.3	8.4	0.491.0	196.4		21.4
Lentil (Giza 370)	83.5	1.3	0.705.9	282.4		1.8
<u>Control (Without treated)</u>						
Broad bean (Giza 402)	78.4	22.8	1.627.9	651.2		
Broad bean (Giza 2)	77.6	27.7	1.999.9	799.9		
Chickpea (Giza 2)	61.6	10.2	0.377.0	150.8		
Lupin (Giza 2)	90.3	9.5	0.596.0	238.4		
Lentil (Giza 370)	86.7	1.2	0.718.3	287.3		
<u>L.S.D</u>						
<u>0.05</u>						
Broad bean Giza 402	N.S	N.S	N.S			
Broad bean Giza 2	N.S	N.S	N.S			
Chickpea Giza 2	N.S	N.S	N.S			
Lupin Giza 2	S	N.S	N.S			
Lentil Giza 370	N.S	N.S	N.S			

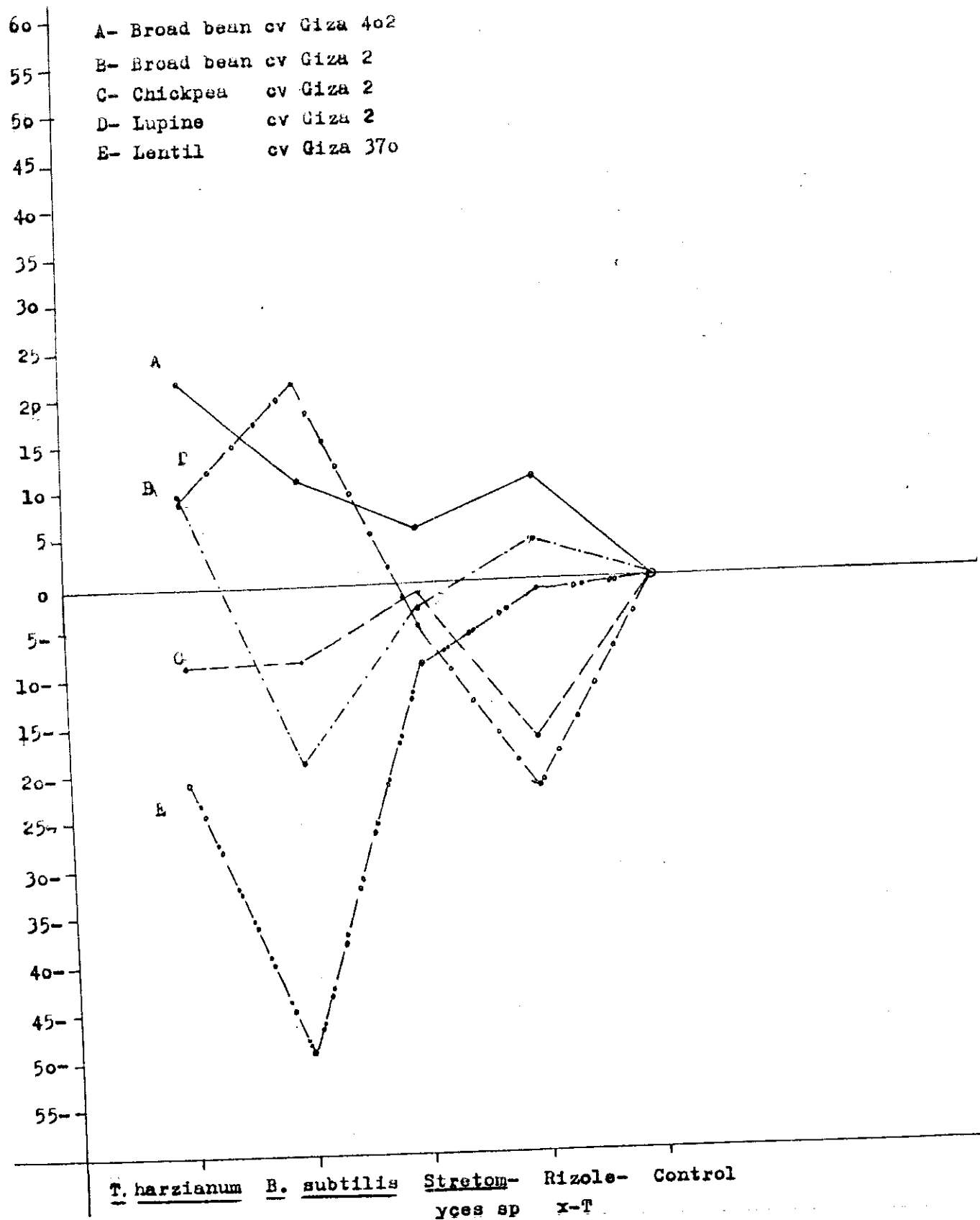


Fig (11b) Show the percentage of increase or decrease of yield compared with control.