

/

الخلاصة

(Azotobacter)

20

(Sucrose Mineral Salts)

13

% 0.10

(EC 6 dS.m⁻¹)

100

The effect of the organic materials addition on Azotobacter efficiency and nitrogen fixation in salinity soil

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Abstract

Isolated 20 strains from Azotobacter bacteria that fixaion nitrogen from many soils ,the strains efficiency were tested for nitrogen fixation by cultured in nutrient media without nitrogen(Sucrose Mineral Salts) with control treatment .The strain number 13 was the higher nitro-gen fixed (0.10%) .The strain efficiency were tested in biological experimen in the soil by glasses containers contain 100 g salinity soil in each one, the organic maters added to some treatment as cow residue and the others corn residue as an energy source for bacteria .The result show high Azotobacter efficiency in nitrogen fixation in salinity soil treatment with cow residue then in soil treatment with corn residue and last the control treatment in different significant .

المقدمة

. (1)

. (2)

%25

100

. (3)

.(4)

. (5)

Azotobactereaceae

Azotobacter vinlandii ,*A. chroococcum* ,*A. beijernkia*. (Tchan and Peter,1984) ,*A. paspali*

(Indole 3-acetic IAA

(Gibberllin)

(6)

acid)

(7)

(Cytokinin)

. (8)

(%25)

(%15-8)

. (9)

(10)

. (11)

) ()
 ()
 90 10
 1 (6-10 - 1-10) 250
 9
 (12) (Sucrose Mineral Salts)
 5 - 3 0 28
 (13)
 (14) % 1
 (15) 0 37
 600 1.4 (16)
 1 Spectrophotometer
 5 30 10 S.M.S.
 (17)
 (Olsen) (18)
 (18) (19)
 (21) (20)
 (14) (22) Walkey -Black
 (1) (13)
 1
 % 1 100 (2)
 45

(1)

6.0	1-	
7.8		
60		
4.55	1-	
454		
21.1	1-	
12.8		
158		
155	1-	
465		
380		
مزيج طينية غرينية		
$10^6 * 2.2$		
$10^4 * 33$	1- C. F. U.	
$10^4 * 1.2$		

(2)

%	%	C : N	%	%	%	ds.m ⁻¹	pH	
.4	0.6	12.8	2.5	32.1	55.3	8.8	6.6	
.1	0.1	37.2	1.1	41.0	70.6	6.1	7.4	

(3)

⁵ 37	1% NaCl	%		
++	++	0.007	-	1
++	+++	0.008	-	2
++	++	0.007	-	3
++	++	0.008	-	4
+	+++	0.008	-	5
++	++	0.005	-	6
++	+++	0.007	-	7
++	++	0.009	-	8
++	+++	0.008	-	9
++	++	0.009	-	10
+	+	0.007	-	11
++	++	0.006	-	12
++	+++	0.010	-	13
++	++	0.005	-	14
++	+	0.007	-	15
+	++	0.009	-	16
++	+++	0.008	-	17
++	++	0.009	-	18
++	+++	0.007	-	19
++	++	0.006	-	20

(24)

1- . 16

. (25)

% 0.13

% 0.18

% 0.22 (4)

% 0.11

% 0.12

% 0.18

⁰ 28

45

(27 26) (5)

. (28)

(4)

+	+		
0.13	0.18	0.11	%
$10^4 * 1.2$	$10^4 * 1.4$	$10^4 * 1.2$	(.)

(5)

% 180

% 250

% 130

(1)

. (27 29)

45

(5)

+	+		
0.18	0.22	0.12	%
$10^4 * 2.2$	$10^4 * 3.5$	$10^4 * 1.6$	(.)

(30)

. (31)

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