

Supplementary information

Table 1. Shoot length of plants under different growth conditions to study the effect of isolate E-2

H (UNIN)	H (IN)	H-NO ₃ ⁻ (UNIN)	H-NO ₃ ⁻ (IN)	H-PO ₄ ⁻ +TCP(UNIN)	H-PO ₄ ⁻ +TCP(IN)
6.5	14	15	12.5	6.5	13
9	17.5	17.5	16.5	8	15
13	18	19	22.6	9.4	16.5
13	18.5	19.5	23	12	16.5
15	19	20	23.2	13	19
15.5	19	20.5	24	14.5	20.5
15.5	21	20.5	25.6	15.5	21.5
16	21.5	22	26	16.5	21.5
16.5	22	22	26.6	16.5	22.5
17	23	22.5	26.7	17	23.5
17	24.5	23.5	27	18	24.5
18	26.5	24	27.7	19.5	25
18	27.5	25	28.5	19.5	25.5
22			32	21.5	26
				22	

Length is represented in cm. Different growth conditions are represented as: H- NO₃⁻ (IN), H- NO₃⁻ (UNIN), H(UNIN), H(IN), H- PO₄⁻+TCP(UNIN), H- PO₄⁻+TCP(IN); where H- Hoagland, IN- Inoculated with bacterial isolate, UNIN- Uninoculated, TCP- Tricalcium phosphate, H- NO₃⁻ - nitrate deficient Hoagland medium, H- PO₄⁻ - phosphate deficient Hoagland medium, +TCP- supplemented with TCP.

Table 2. Root length of plants under different growth conditions to study the effect of isolate E-2

H (UNIN)	H (IN)	H-NO ₃ ⁻ (UNIN)	H-NO ₃ ⁻ (IN)	H-PO ₄ ⁻ +TCP(UNIN)	H-PO ₄ ⁻ +TCP(IN)
8	3	11.4	4	3.5	2.5
6	3.5	9.5	4.4	4.5	4
4.5	4.5	9.5	4.3	10	2.5
8.5	3.5	9	4	12	3
6.5	3	7	4	6.5	2.8
8	3.5	9.3	3	8	4
9.5	4	6	3.8	3.5	4.5
7	4.5	10	5.4	7.5	5
7	4.5	11	5	9	4
5.5	4	13	4	6	5
7.5	4	12	7	9	4.5
6.8	5.5	10.2	5.8	4.5	4.5
7	5	10	5.8	7.5	4.5
10			6.4	6	4
				7	

Length is represented in cm. Different growth conditions are represented as: H- NO₃⁻ (IN), H-NO₃⁻ (UNIN), H(UNIN), H(IN), H- PO₄⁻+TCP(UNIN), H- PO₄⁻+TCP(IN); where H- Hoagland, IN- Inoculated with bacterial isolate, UNIN- Uninoculated, TCP- Tricalcium phosphate, H- NO₃⁻ - nitrate deficient Hoagland medium, H- PO₄⁻ - phosphate deficient Hoagland medium, +TCP- supplemented with TCP.

Table 3. Number of leaves of plants under different growth conditions to study the effect of isolate E-2

H (UNIN)	H (IN)	H-NO ₃ ⁻ (UNIN)	H-NO ₃ ⁻ (IN)	H-PO ₄ ⁻ +TCP(UNIN)	H-PO ₄ ⁻ +TCP(IN)
3	4	4	4	3	3
3	4	4	5	3	4
2	3	3	4	4	4
3	4	4	4	3	4
3	4	3	4	4	4
4	4	3	5	4	4
4	4	4	3	3	4
3	4	4	3	4	5
4	4	4	5	4	4
4	4	4	4	3	4
4	3	4	5	4	4
4	4	3	3	4	4
3	4	3	3	4	5
4			4	4	4
				3	

Different growth conditions are represented as: H- NO₃⁻ (IN), H-NO₃⁻ (UNIN), H(UNIN), H(IN), H- PO₄⁻+TCP(UNIN), H- PO₄⁻+TCP(IN); where H- Hoagland, IN- Inoculated with bacterial isolate, UNIN- Uninoculated, TCP- Tricalcium phosphate, H- NO₃⁻ - nitrate deficient Hoagland medium, H- PO₄⁻ - phosphate deficient Hoagland medium, +TCP- supplemented with TCP.

Table 4. Number of roots of plants under different growth conditions to study the effect of isolate E-2

H (UNIN)	H (IN)	H-NO ₃ ⁻ (UNIN)	H-NO ₃ ⁻ (IN)	H-PO ₄ ⁻ +TCP(UNIN)	H-PO ₄ ⁻ +TCP(IN)
20	15	10	8	8	17
3	8	24	8	2	5
7	20	12	20	5	8
8	12	15	12	8	14
12	10	8	15	5	20
11	15	16	22	10	10
15	10	30	20	8	10
10	18	25	16	8	15
12	12	18	22	4	15
15	15	23	17	7	10
12	17	22	13	4	16
15	18	18	25	5	15
10	22	16	16	5	12
17			15	4	12
				3	

Different growth conditions are represented as: H- NO₃⁻ (IN), H-NO₃⁻ (UNIN), H(UNIN), H(IN), H- PO₄⁻+TCP(UNIN), H- PO₄⁻+TCP(IN); where H- Hoagland, IN- Inoculated with bacterial isolate, UNIN- Uninoculated, TCP- Tricalcium phosphate, H- NO₃⁻ - nitrate deficient Hoagland medium, H- PO₄⁻ - phosphate deficient Hoagland medium, +TCP- supplemented with TCP.

Table 5. Shoot length of plants under different growth conditions to study the effect of isolate T-2

H (UNIN)	H (IN)	H-NO ₃ ⁻ (UNIN)	H-NO ₃ ⁻ (IN)	H-PO ₄ ⁻ +TCP(UNIN)	H-PO ₄ ⁻ +TCP(IN)
6.5	12.2	8.5	10.5	8	12
7	13.3	11	14.7	9.5	13
8.5	13.3	12	14.8	10	13
9	13.5	12.5	15	10	13.5
11	13.5	12.5	15.3	10.5	13.5
11.3	13.7	12.5	15.5	11.2	14
12.7	13.7	13	15.7	11.2	14
13.5	14	13	15.8	11.5	14.5
13.5	14.2	13.3	16	12	15
13.8	14.3	13.5	16	12.5	15
14	14.4	13.5	16	12.5	15.5
14	15	14	16.5	14.5	15.5
14.7	15.4	15.4	16.7	15	15.5
16.4	16.5		17.3	15.7	16.5
			17.7		17

Length is represented in cm. Different growth conditions are represented as: H- NO₃⁻ (IN), H-NO₃⁻ (UNIN), H(UNIN), H(IN), H- PO₄⁻+TCP(UNIN), H- PO₄⁻+TCP(IN); where H- Hoagland, IN- Inoculated with bacterial isolate, UNIN- Uninoculated, TCP- Tricalcium phosphate, H- NO₃⁻ - nitrate deficient Hoagland medium, H- PO₄⁻ - phosphate deficient Hoagland medium, +TCP- supplemented with TCP.

Table 6. Root length of plants under different growth conditions to study the effect of isolate T-2

H (UNIN)	H (IN)	H-NO ₃ ⁻ (UNIN)	H-NO ₃ ⁻ (IN)	H-PO ₄ ⁻ +TCP(UNIN)	H-PO ₄ ⁻ +TCP(IN)
6.2	2.7	9.5	3	7	4.3
5	5	7	4	5	4.5
8.5	2.7	8	4.5	4	5.5
6	3.7	7	5	4.5	5.5
5	4.8	8	4	4	6
3	3.2	9.5	4	4	4
6	3.3	9	4	6	4
3.5	3.5	7.5	4.3	5	5
9	3	5.5	5	4	5.9
10.7	5	9.6	4	6	5.2
10	3	4	4.8	4.7	4.3
10.6	4	6.5	3.5	5.5	5
7	3.2	7	3.5	8	5
10.5	4		5	6.5	3
			5.5		5.8

Length is represented in cm. Different growth conditions are represented as: H- NO₃⁻ (IN), H- NO₃⁻ (UNIN), H(UNIN), H(IN), H- PO₄⁻+TCP(UNIN), H- PO₄⁻+TCP(IN); where H- Hoagland, IN- Inoculated with bacterial isolate, UNIN- Uninoculated, TCP- Tricalcium phosphate, H- NO₃⁻ - nitrate deficient Hoagland medium, H- PO₄⁻ - phosphate deficient Hoagland medium, +TCP- supplemented with TCP.

Table 7. Number of leaves of plants under different growth conditions to study the effect of isolate T-2

H (UNIN)	H (IN)	H-NO ₃ ⁻ (UNIN)	H-NO ₃ ⁻ (IN)	H-PO ₄ ⁻ +TCP(UNIN)	H-PO ₄ ⁻ +TCP(IN)
3	3	3	3	3	3
2	3	3	4	3	3
2	3	3	4	3	3
3	4	3	4	3	3
2	3	3	4	3	3
3	3	3	4	3	3
3	3	3	4	3	3
3	3	3	4	3	3
3	4	3	4	3	4
3	3	3	4	3	3
3	3	3	4	3	3
3	4	3	4	3	3
3	3	3	4	3	3
3	4		4	3	4
			4		3

Different growth conditions are represented as: H- NO₃⁻ (IN), H-NO₃⁻ (UNIN), H(UNIN), H(IN), H- PO₄⁻+TCP(UNIN), H- PO₄⁻+TCP(IN); where H- Hoagland, IN- Inoculated with bacterial isolate, UNIN- Uninoculated, TCP- Tricalcium phosphate, H- NO₃⁻ - nitrate deficient Hoagland medium, H- PO₄⁻ - phosphate deficient Hoagland medium, +TCP- supplemented with TCP.

Table 8. Number of roots of plants under different growth conditions to study the effect of isolate T-2

H (UNIN)	H (IN)	H-NO ₃ ⁻ (UNIN)	H-NO ₃ ⁻ (IN)	H-PO ₄ ⁻ +TCP(UNIN)	H-PO ₄ ⁻ +TCP(IN)
4	8	7	8	6	4
2	8	8	10	7	8
5	15	6	12	6	5
5	15	8	7	12	5
11	9	8	10	12	8
10	11	5	15	12	5
9	12	8	12	5	10
4	12	4	16	9	6
4	16	8	18	9	9
4	9	6	12	5	7
8	9	12	15	5	8
5	14	8	15	5	8
4	10	8	11	7	7
7	16		8	5	13
			17		8

Different growth conditions are represented as: H- NO₃⁻ (IN), H-NO₃⁻ (UNIN), H(UNIN), H(IN), H- PO₄⁻+TCP(UNIN), H- PO₄⁻+TCP(IN); where H- Hoagland, IN- Inoculated with bacterial isolate, UNIN- Uninoculated, TCP- Tricalcium phosphate, H- NO₃⁻ - nitrate deficient Hoagland medium, H- PO₄⁻ - phosphate deficient Hoagland medium, +TCP- supplemented with TCP.

Table 9. Shoot length of plants under different growth conditions to study the effect of isolate T-1

H (IN)	H-NO ₃ ⁻ (UNIN)	H-NO ₃ ⁻ (IN)	H-PO ₄ ⁻ +TCP(UNIN)	H-PO ₄ ⁻ +TCP(IN)
14.8	8.5	11.7	6	6.5
15.5	9.8	16	10	11.5
16.5	10	18	11.4	13
18.5	12.3	19.5	14	13.5
18.7	12.5	20	14.5	17
19	12.7	20.4	15	18
19.5	12.7	20.8	15.5	19
19.7	13	21	16	19
20	13	21.3	16.5	19.5
20	13	21.3	17	21.5
20	13.5	21.5	17.5	21.5
20	13.5	21.5	18.2	22.5
20.2	14.3	21.7	18.3	22.8
20.2	14.5	22	18.3	23
21	14.8	22.5	18.4	23.4
21.3	15	22.6	18.5	23.5
21.5	15	23	18.5	23.8
21.7	15.7	23	18.7	24
21.8	15.8	23	19	24.5
22	16	23	19.2	24.5
22	16.7	23.2	19.3	24.5
22.2	16.8	23.2	20.2	26
23.3	17.7	24	20.7	
23.7	21	24	21.5	
	21	26.3		

Length is represented in cm. Different growth conditions are represented as: H- NO₃⁻ (IN), H-NO₃⁻ (UNIN), H(UNIN), H(IN), H- PO₄⁻+TCP(UNIN), H- PO₄⁻+TCP(IN); where H- Hoagland, IN- Inoculated with bacterial isolate, UNIN- Uninoculated, TCP- Tricalcium phosphate, H- NO₃⁻ - nitrate deficient Hoagland medium, H- PO₄⁻ - phosphate deficient Hoagland medium, +TCP- supplemented with TCP.

Table 10. Root length of plants under different growth conditions to study the effect of isolate T-1

H (IN)	H-NO ₃ ⁻ (UNIN)	H-NO ₃ ⁻ (IN)	H-PO ₄ ⁻ +TCP(UNIN)	H-PO ₄ ⁻ +TCP(IN)
5.4	7.5	6.5	8.5	3
8	6.5	6.5	8.5	3.7
5	6.7	6	7	5.7
5.5	7.3	6.7	12	4.6
6.5	7.5	7	10.5	6
3.6	7.5	6.4	11.5	6
3.7	8.5	7.3	11	6.5
5.3	7	6	10	7.5
7.7	5.5	8.3	11	8.7
5.5	9	6.5	11	5.5
5.5	8.5	8.3	9	8.5
7	8.8	8.3	5	7.8
6	9	7.5	8.7	6.5
7.3	8.5	8	9	6
6	8.5	7.7	6	8
6.7	8.5	8.5	7.7	5.8
7.5	9.5	8.4	10.5	10
5.7	7.4	7.5	10.5	7.5
7.8	9.5	7.3	11	6
5	8.7	6.8	11	6.7
6.3	10	7.5	13	5.6
7.5	9.5	7.8	9.7	6.3
6	11.5	8.6	10	
6	8.5	8.2	8.5	
	8	9.7		

Length is represented in cm. Different growth conditions are represented as: H- NO₃⁻ (IN), H-NO₃⁻ (UNIN), H(UNIN), H(IN), H- PO₄⁻+TCP(UNIN), H- PO₄⁻+TCP(IN); where H- Hoagland, IN- Inoculated with bacterial isolate, UNIN- Uninoculated, TCP- Tricalcium phosphate, H- NO₃⁻ - nitrate deficient Hoagland medium, H- PO₄⁻ - phosphate deficient Hoagland medium, +TCP- supplemented with TCP.

Table 11. Number of leaves of plants under different growth conditions to study the effect of isolate T-1

H (IN)	H-NO ₃ ⁻ (UNIN)	H-NO ₃ ⁻ (IN)	H-PO ₄ ⁻ +TCP(UNIN)	H-PO ₄ ⁻ +TCP(IN)
3	4	3	2	3
4	3	4	3	3
3	4	4	3	4
3	4	4	4	4
4	4	4	4	4
3	4	4	3	5
3	4	4	4	4
4	2	3	4	4
3	4	4	4	4
3	4	4	4	4
4	3	4	3	3
4	3	4	3	4
4	4	4	3	5
3	3	4	3	4
4	3	4	4	4
4	4	4	4	3
4	2	4	4	4
3	4	5	4	4
3	3	4	4	4
3	4	4	4	4
4	5	4	4	4
4	4	5	4	4
4	3	4	4	
3	4	4	3	
	4	4		

Different growth conditions are represented as: H- NO₃⁻ (IN), H-NO₃⁻ (UNIN), H(UNIN), H(IN), H- PO₄⁻+TCP(UNIN), H- PO₄⁻+TCP(IN); where H- Hoagland, IN- Inoculated with bacterial isolate, UNIN- Uninoculated, TCP- Tricalcium phosphate, H- NO₃⁻ - nitrate deficient Hoagland medium, H- PO₄⁻ - phosphate deficient Hoagland medium, +TCP- supplemented with TCP.

Table 12. Number of roots of plants under different growth conditions to study the effect of isolate T-1

H (IN)	H-NO ₃ ⁻ (UNIN)	H-NO ₃ ⁻ (IN)	H-PO ₄ ⁻ +TCP(UNIN)	H-PO ₄ ⁻ +TCP(IN)
7	8	5	5	5
7	18	4	3	3
18	9	15	3	3
18	14	10	7	6
12	17	5	7	10
12	17	24	5	10
14	13	14	4	7
7	10	10	4	4
7	18	8	4	10
22	12	12	10	12
13	10	7	3	6
10	13	10	10	9
17	11	15	6	6
8	18	16	7	10
13	12	22	7	7
12	15	17	8	7
15	17	17	5	8
13	23	16	6	7
12	14	20	5	10
7	17	13	5	7
16	15	17	3	5
7	20	12	12	10
11	15	8	7	
9	10	16	8	
	12	25		

Different growth conditions are represented as: H- NO₃⁻ (IN), H-NO₃⁻ (UNIN), H(UNIN), H(IN), H- PO₄⁻+TCP(UNIN), H- PO₄⁻+TCP(IN); where H- Hoagland, IN- Inoculated with bacterial isolate, UNIN- Uninoculated, TCP- Tricalcium phosphate, H- NO₃⁻ - nitrate deficient Hoagland medium, H- PO₄⁻ - phosphate deficient Hoagland medium, +TCP- supplemented with TCP.