Isolation and Characterization of Plant-Growth-Promoting, Drought Tolerant Rhizobacteria for Improved Maize Productivity

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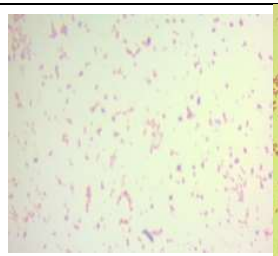
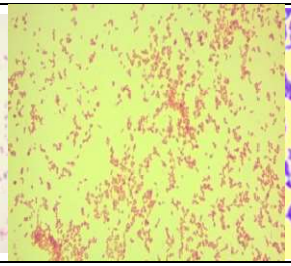
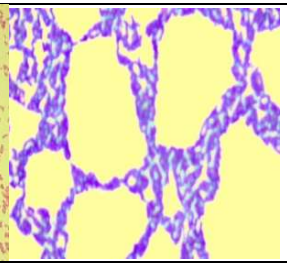
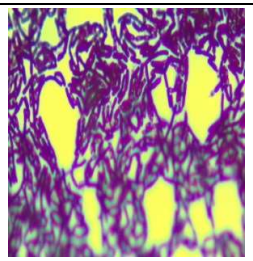
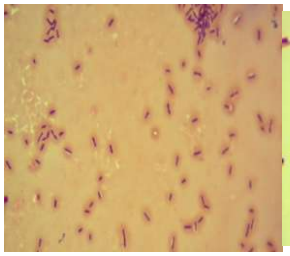
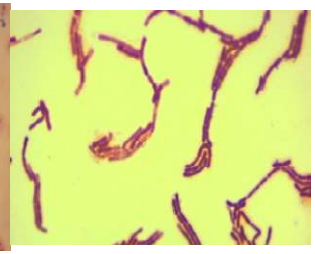
Supplementary files

Parameters	**Rhizobacterial Isolates**					
Isolate code	**A5-1**	**A1-2**	**B8-3**	**B12-4**	**B9-5**	**B15-6**
Identification of isolates according to NCBI	***B. licheniformis***	***A. caviae***	***B. cereus***	***P. flexa***	***B. licheniformis***	***B. simplex***
Microscopic appearance						
Accession No :	ON745408	ON745409	ON745413	ON745414	ON745412	ON745413
% Similarity	100	99.83	100	100	100	100

Isolate code	**C6-7**	**C7_8**	**C1-9**	**A9-10**	**A10-11**
Identification of isolates according to NCBI	***P. flexa***	***A. veronii***	***P. aryabhattai***	***B. halotolerans***	***B. endophyticus***

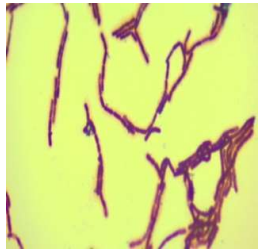
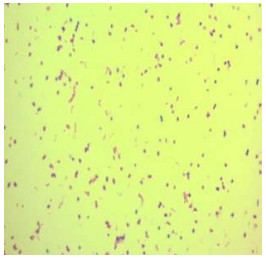
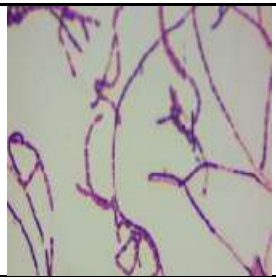
Microscopic appearance					
Accession No :	ON745414	ON745415	ON745416	ON745417	ON745418
% Similarity	100	100	100	100	100

Figure S1. Microscopic View of Rhizobacterial Strains Isolated from Maize Plants.

Table S1. Morpho-biochemical Characteristics of The Isolated Rhizobacterial Strains.

Bacteria identified	Gram Reaction	Shape	Motility	Catalase	Oxidase	SH	CIT	NR	MAL	LAC	GLU	SUC	FRU	XYL	GAL
A5-1	+	Short rod	Motile	+	+	-	+	+	+	-	+	+	+	+	+
A1-2	-	Short rod	Motile	+	+	+	+	+	+	+	+	+	-	-	-
B8-3	+	Short rod	Motile	-	+	+	+	+	+	-	+	+	-	-	-
B12-4	+	Rod	Motile	+	-	-	+	ND	+	+	+	+	-	-	+
B9-5	+	Rod	Motile	+	+	+	-	+	+	+	+	+	-	-	-
B15-6	+	Rod	Motile	-	+	-	-	+	+	+	+	+	-	-	-
C6-7	+	Bacilli	Motile	+	-	+	+	+	+	-	+	+	+	+	+
C7_8	-	Cocci	Motile	+	+	+	+	+	+	+	+	+	-	-	-
C1-9	+	Rod	Motile	+	-	-	+	+	+	-	+	+	-	-	-
A9-10	+	Cocci	Non-motile	+	-	-	+	+	+	-	+	+	+	ND	-
A10-11	+	Rod	Non-motile	+	+	-	+	+	+	-	+	+	-	-	+

Legend: - = negative, + = positive, ND=Not determined, SH=Starch Hydrolysis, CIT=Citrate, NR=Nitrate Reduction, MAL=Maltose, SUC=Sucrose, GLU=Glucose, LAC=Lactose, FRU=Fructose, XYL= Xylose, GAL=Galactose.

The calculation of Field Capacity (FC)
Add 6 kg of soil 3 Liters of Maximum Water Rentention Capapcity (MRC), i.e. 50 ml MRC water for 100 g of soil.
2/9 MRC water was used. i.e. (3000 ml x 2)/9 = 666, 66 ml or 670 ml.

For drought:
100%, 670 ml of water for 6 kg of soil was used.
50%, 335 ml of water for 6 kg of soil was used.
25%, 167 ml, 5, or 170 ml of water for 6 kg of soil was used.