

Supplemental Material S1- Prominent bacterial families (%) present in endophyte infected and endophyte free tall fescue soil

Phylum	Order (EI, EF)	Family	Endophyte Infected (EI)	Endophyte Free (EF)
Proteobacteria	Rhizobiales (38, 37)	<i>Bradyrhizobiaceae</i> (N-fix) (Myc-Symb)	26	26
		<i>Hyphomicrobiaceae</i> (Phl)	13	18
		<i>Rhizobiales_Incertae_Sedis</i> (N-Fix)	10	10
		<i>Xanthobacteraceae</i> (N-Fix)	35	30
		<i>Rhodobiaceae</i> (N-Fix)	4	6
		<i>Phyllobacteriaceae</i>	4	Abs
		<i>Methylobacteriaceae</i> (PGP)	3	Abs
	Rickettsiales (13, 12)	<i>Mitochondria</i>	86	77
	Xanthomonadales (6, 14)	<i>Xanthomonadales_Incertae_Sedis</i>	80	75
		<i>Xanthomonadaceae</i> (PP)	5	9
	Rhodospirillales (7, 6)	<i>Rhodospirillales_Incertae_Sedis</i>	20	33
		<i>Rhodospirillaceae</i> (N-fix)	14	22
		<i>Acetobacteraceae</i>	26	11
	Nitrosomonadales (8, 9)	<i>Nitrosomonadaceae</i> (AOB)	100	100
	Burkholderiales (7, 3)	<i>Comamonadaceae</i> (Dntf) (Myc-Symb)	38	54
		<i>Burkholderiaceae</i> (PSB) (ZnSb) (DrtTol)	38	23
		<i>Oxalobacteraceae</i> (Myc-Symb)	24	15
	Sphingomonadales (3, 25)	<i>Sphingomonadaceae</i> (Biocon) (PhlRem)	96	100
	Desulfuromonadales (1, 5)	<i>Geobacteraceae</i> (FeRd) (SlfRB)	100	100
	Desulfurellales (5, 4)	<i>Desulfurellaceae</i> (SlfRB)	100	100
Planctomycetes	Planctomycetales (88, 100)	<i>Planctomycetaceae</i> (NH3-Ox)	100	95
		<i>Phycisphaeraceae</i>	18	5
Verrucomicrobia	Chthoniobacteriales (99, 98)	<i>DA101 soil group</i>	86	86
		<i>Xiphinematobacteraceae</i>	3	7
		<i>Chthoniobacteraceae</i>	7	7
	Verrucomicrobiales (6, 2)	<i>Verrucomicrobiaceae</i>	100	100

Bacteroidetes	Sphingobacteriales (68, 87)	<i>Sphingobacteriaceae</i> (Biocon)	10	10
		<i>Chitinophagaceae</i>	84	89
	Cytophagales (7, 8)	<i>Cytophagaceae</i>	100	100
	Flavobacteriales (25, 4)	<i>Flavobacteriaceae</i> (PGPR)	98	80
		<i>NS9 marine group</i>	2	20
Nitrospirae	Nitrospirales (100, 100)	<i>Nitrospiraceae</i> (NB)	69	70
		<i>0319-6A21</i> (NB)	31	30
Acidobacteria	Blastocatellales (67,79)	<i>Blastocatellaceae</i> (Subgroup_4)	100	100
	Acidobacteriales (25,0)	<i>Acidobacteriaceae</i> (Subgroup_1) (NitR)	100	Abs
	Solibacterales (1,0)	<i>Solibacteraceae</i> (Subgroup_3)	100	Abs
Gemmatimonadetes	Gemmatimonadales (100, 100)	<i>Gemmatimonadaceae</i>	100	100
Actinobacteria	Solirubrobacterales (27, 43)	<i>Elev-16S-1332</i>	81	61
		<i>0319-6M6</i>	11	11
		<i>Solirubrobacteraceae</i>	Abs	11
	Micrococcales (17, 21)	<i>Micrococcaceae</i> (SlntRlf)	91	100
	Gaiellales (20, 10)	<i>Gaiellaceae</i>	20	25
	Acidobacteriales (0, 7)	<i>Acidobacteriaceae</i> (Subgroup_1)	Abs	100
	Corynebacteriales (10, 0)	<i>Mycobacteriaceae</i>	100	Abs
	Acidimicrobiales (14, 0)	<i>Acidimicrobiaceae</i>	5	Abs
Chloroflexi	Anaerolineales (61, 53)	<i>Anaerolineaceae</i>	100	100
	Ktedonobacterales (23, 23)	<i>HSB_OF53-F07</i>	22	39
		<i>Ktedonobacteraceae</i>	48	16
		<i>Thermosporotrichaceae</i>	5	Abs
	Chloroflexales (5, 5)	<i>Roseiflexaceae</i>	100	100
Firmicutes	Bacillales (84, 65)	<i>Bacillaceae</i> (PSB)	80	84
		<i>Paenibacillaceae</i> (PSB)	8	10
		<i>Alicyclobacillaceae</i>	4	6
	Clostridiales (6, 13)	<i>Clostridiaceae</i> 1 (PP)	36	40
		<i>Gracilibacteraceae</i>		10
		<i>Peptostreptococcaceae</i>	Abs	30
		<i>Ruminococcaceae</i>	Abs	10
		<i>Lachnospiraceae</i>	64	10
	Erysipelotrichales (10, 22)	<i>Erysipelotrichaceae</i>	100	100

Abbreviations for bacterial functions within EI and EF rhizosphere soil: AnPhtB, anaerobic photosynthetic bacteria; AOB, Ammonia oxidizing bacteria; BC, bio-controller; DnB, denitrifying bacteria; FBC, fungal bio-controller; FeRB, iron reducing bacteria; N-fix, nitrogen fixing bacteria; NOA, nitrite oxidizing Archaea; NOB, nitrite oxidizing bacteria; NitR, nitrate reducers; ; Pdtx, Phosphate detoxifier; PGP, plant growth promoter; Pht, phototrophic Bacteria; PP, Plant Pathogen; PrSlfB, purple sulfur reducing bacteria; PSB, phosphorus solubilizing bacteria; SlfRB, sulfur reducing bacteria and UD, undetermined. *Abs = Absent. Percent abundance of order is given in parenthesis for respective families.