

Sample and replicates	Edaphic factors												Shannon	Observe features		Faith PD		
	pH	E.C	CaCO3	O.M	P ppm	K ppm	CIC	Ca+2	Mg+2	K+	Na+	% Sand	B	F	B	F	B	F
FRS R1	8.16	0.19	10.1	2.07	8	439	27.2	23.92	1.88	1.23	0.17	40	7.890	4.1516	784	358	39.5250	57.6901
FRS R2	8.13	0.21	10.2	1.98	8.8	390	31.2	28.08	1.97	0.94	0.21	36	6.9104	3.9534	536	317	29.4545	55.1869
FRS R3	8.21	0.16	10.3	1.58	8.8	371	27.84	25.05	1.78	0.78	0.23	38	8.3321	3.5101	967	392	43.0372	67.3402
DRS R1	7.8	0.57	14.3	1.08	3.25	148	21.44	18.88	1.92	0.3	0.34	42	8.0614	2.6314	685	228	32.5487	44.552
DRS R2	8.13	0.16	14.3	0.63	4.7	190	21.6	19.09	1.82	0.47	0.23	42	7.2559	3.6263	627	306	32.1099	57.0597
DRS R3	8.27	0.12	16.8	0.17	3.4	165	22.08	18.21	1.88	0.32	0.15	38	6.7927	3.9894	703	310	32.9803	52.9554

Table S1. Values of edaphic factors and alpha diversity indices of fertile (FRS) and degraded (DRS) rhizospheric soil. B: bacteria, F: fungi.

Parameters	Average in FRS	Average in DRS
pH	8.17 ^a	8.07 ^a
C.E	0.19 ^a	0.28 ^a
CaCO ₃	10.2 ^b	15.13 ^a
O.M	1.88 ^a	0.63 ^b
P (ppm)	8.53 ^a	13.83 ^b
K (ppm)	400 ^a	167.67 ^b
CIC	28.75 ^a	21.71 ^b
Ca+2	25.75 ^a	18.73 ^b
Mg+2	1.88 ^a	1.87 ^a
K+	0.98 ^a	0.36 ^b
Na+	0.2 ^a	0.24 ^a
% Sand	38 ^a	40.67 ^a
% Silt	27 ^b	32.33 ^a
% Clay	35 ^a	27 ^b

Table S2. Paired t-test on soil physicochemical variables. Different letters indicate significance (at $p < 0.05$). FRS: rhizosphere soil, DRS: Degraded rhizosphere soil.

BACTERIA	Phylum		p-value
	Actinobacteria	DRS-DBS	0.1047
		FBS- DBS	0.3143
		FRS-DBS	0.8948
		FBS-DRS	0.0082*
		FRS-DRS	0.2710
		FRS-FBS	0.1234
	Acidobacteria	DRS-DBS	0.4328
		FBS- DBS	0.2502
		FRS-DBS	0.9798
		FBS-DRS	0.0273*
		FRS-DRS	0.2725
		FRS-FBS	0.4014
	Chloroflexi	DRS-DBS	0.0001*
		FBS- DBS	0.2636
		FRS-DBS	0.0009*
		FBS-DRS	0.0003*
		FRS-DRS	0.0563
		FRS-FBS	0.0098*
	Planctomycetes	DRS-DBS	0.1344
		FBS- DBS	0.0025*
		FRS-DBS	0.2370
		FBS-DRS	0.0002*
		FRS-DRS	0.9739
		FRS-FBS	0.0003*

Tabla S3. Kruskal-Wallis H test was performed on the five most abundant bacterial phyla. Only those phyla that showed significant differences are reported.

FUNGI Phylum		p-value
Chytridiomycota	DRS-DBS	0.0187*
	FBS- DBS	0.9954
	FRS-DBS	0.0846
	FBS-DRS	0.0255*
	FRS-DRS	0.7078
	FRS-FBS	0.1168
Mortierellomycota	DRS-DBS	0.0002*
	FBS- DBS	0.2032
	FRS-DBS	0.0001*
	FBS-DRS	0.0017*
	FRS-DRS	0.9669
	FRS-FBS	0.0010*

Table S4. Kruskal-Wallis H test on the five most abundant fungal phyla. Only those phyla that showed significant differences are reported.