

Table S1 Significant differences among the different treatments based on one-way ANOVA.

Phylum		Soil origin												
		Exo-C	Exo-S	Exo-B	Exo-P	E-C	E-S	E-P	M-C	M-A	M-P	L-C	L-B	L-P
		K	v	i	v	K	v	v	K	g	v	K	i	v
Bacteri a	Proteobacteria	b	ab	a	ab				a	b	b			
	Acidobacteria	a	b	ab	a	ab	a	b	b	a	a			
	Actinobacteria	b	a	b	b									
	Gemmatimonadet es								a	b	b			
Fungi	Ascomycota	b	a	a	a									
	Basidiomycota	c	b	c	a									
	Glomeromycota	b	a	a	a				b	a	a	b	a	ab

Notes: Exo-CK, E-CK, M-CK, and L-CK, no plants were prepared. Exo-Sv, Exo-Bi, and Exo-Pv, field Exo soil in pots were grown for *Setaria viridis* (Sv), *Bothriochloa ischaemum* (Bi), and *Panicum virgatum* (Pv), respectively. E-Sv and E-Pv, field E soil in pots were grown for Sv and Pv, respectively. M-Ag and M-Pv, field M soil in pots was grown for Ag and Pv, respectively. L-Bi and L-Pv, field L soil in pots were grown for Bi and Pv, respectively. Different letters indicate significant differences among groups base on Duncan's post hoc test ($P < 0.05$).

Table S2 The R^2 and P values under different treatments were performed by permutational multivariate analysis of variance (PERMANOVA) at the OUT level.

Soil origin	Bacteria				Fungi			
	Exo-C K	Exo-S v	Exo-Bi	Exo-P v	Exo-C K	Exo-S v	Exo-Bi	Exo-P v
Exo-CK	-	0.001	0.033	0.021	-	0.001	0.010	0.029
Exo-Sv	0.398	-	0.010	0.246	0.316	-	0.031	0.129
Exo-Bi	0.514	0.335	-	0.056	0.393	0.317	-	0.072
Exo-Pv	0.358	0.174	0.199	-	0.291	0.195	0.322	-
	E-CK	E-Sv	E-Pv		E-CK	E-Sv	E-Pv	
E-CK	-	0.033	0.090		-	0.038	0.049	
E-Sv	0.278	-	0.001		0.328	-	0.152	
E-Pv	0.209	0.520	-		0.271	0.241	-	
	M-CK	M-Ag	M-Pv		M-CK	M-Ag	M-Pv	
M-CK	-	0.031	0.027		-	0.025	0.029	
M-Ag	0.519	-	0.089		0.221	-	0.001	
M-Pv	0.528	0.168	-		0.262	0.269	-	
	L-CK	L-Bi	L-Pv		L-CK	L-Bi	L-Pv	
L-CK	-	0.255	0.128		-	0.001	0.036	
L-Bi	0.151	-	0.301		0.239	-	0.420	
L-Pv	0.183	0.165	-		0.237	0.131	-	

Note: The upper triangle of the matrix shows the P value and the lower triangle shows the R^2 value. Exo-CK, E-CK, M-CK, and L-CK, no plants were prepared. Exo-Sv, Exo-Bi, and Exo-Pv, field Exo soil in pots were grown for *Setaria viridis* (Sv), *Bothriochloa ischaemum* (Bi), and *Panicum virgatum* (Pv), respectively. E-Sv and E-Pv, field E soil in pots were grown for Sv and Pv, respectively. M-Ag and M-Pv, field M soil in pots was grown for Ag and Pv, respectively. L-Bi and L-Pv, field L soil in pots were grown for Bi and Pv, respectively.

Table S3 Topological characteristics of the network.

Soil origin	Bacteria				Fungi			
	Number of nodes	Number of edges	Positive edges	Positive edge percentage (%)	Number of nodes	Number of edges	Positive edges	Positive edge percentage (%)
Exo-CK	162	1210	728	60.17	23	61	60	98.36
Exo-Sv	162	1523	852	55.94	32	98	87	88.78
Exo-Bi	154	1455	792	54.43	29	70	45	64.29
Exo-Pv	155	1434	850	59.27	34	97	76	78.35
E-CK	151	1612	883	54.78	41	119	86	72.27
E-Sv	143	1484	824	55.53	32	115	97	84.35
E-Pv	152	1413	774	54.78	40	114	81	71.05
M-CK	144	1026	588	57.31	36	101	74	73.27
M-Ag	148	1090	639	58.62	38	94	78	82.98
M-Pv	148	1195	690	57.74	36	96	66	68.75
L-CK	140	1027	647	63.00	39	95	73	76.84
L-Bi	144	1065	665	62.44	50	191	123	64.40
L-Pv	140	1388	763	54.97	47	189	169	89.42

Note: Exo-CK, E-CK, M-CK, and L-CK, no plants were prepared. Exo-Sv, Exo-Bi, and Exo-Pv, field Exo soil in pots were grown for *Setaria viridis* (Sv), *Bothriochloa ischaemum* (Bi), and *Panicum virgatum* (Pv), respectively. E-Sv and E-Pv, field E soil in pots were grown for Sv and Pv, respectively. M-Ag and M-Pv, field M soil in pots was grown for Ag and Pv, respectively. L-Bi and L-Pv, field L soil in pots were grown for Bi and Pv, respectively.

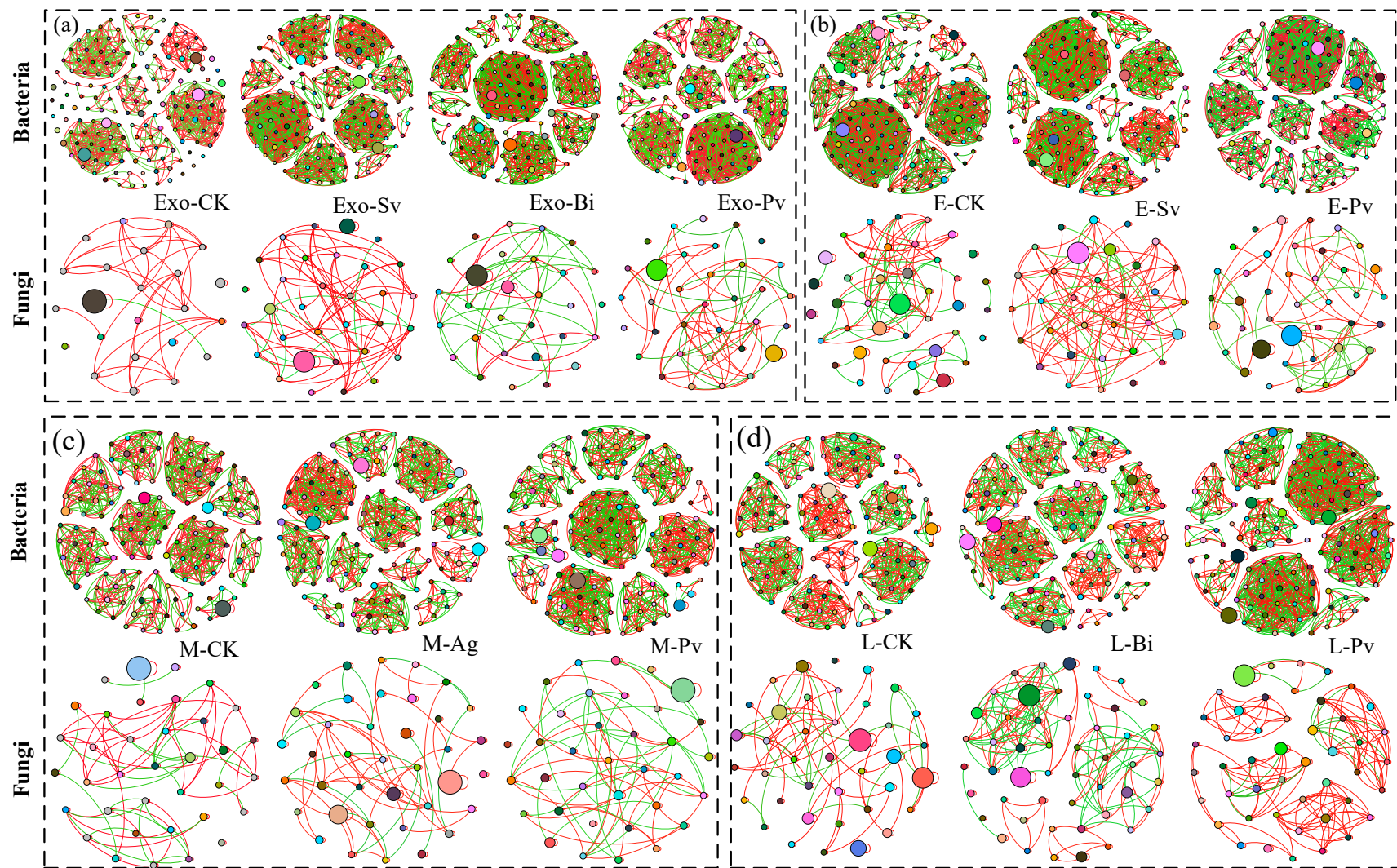


Figure S1 Correlation networks of soil bacteria and fungi at the genus level. Notes: One node represents one genus type. The size of the node represents the relative abundance of a genus. Nodes have different colors that relate to the genus. Red lines represent positive correlations, green lines represent negative correlations. Exo-CK, E-CK, M-CK, and L-CK, no plants were prepared. Exo-Sv, Exo-Bi, and Exo-Pv, field Exo soil in pots were grown for *Setaria viridis* (Sv), *Bothriochloa ischaemum* (Bi), and *Panicum virgatum* (Pv), respectively. E-Sv and E-Pv, field E soil in pots were grown for Sv and Pv, respectively. M-Ag and M-Pv, field M soil in pots was grown for Ag and Pv, respectively. L-Bi and L-Pv, field L soil in pots were grown for Bi and Pv, respectively.