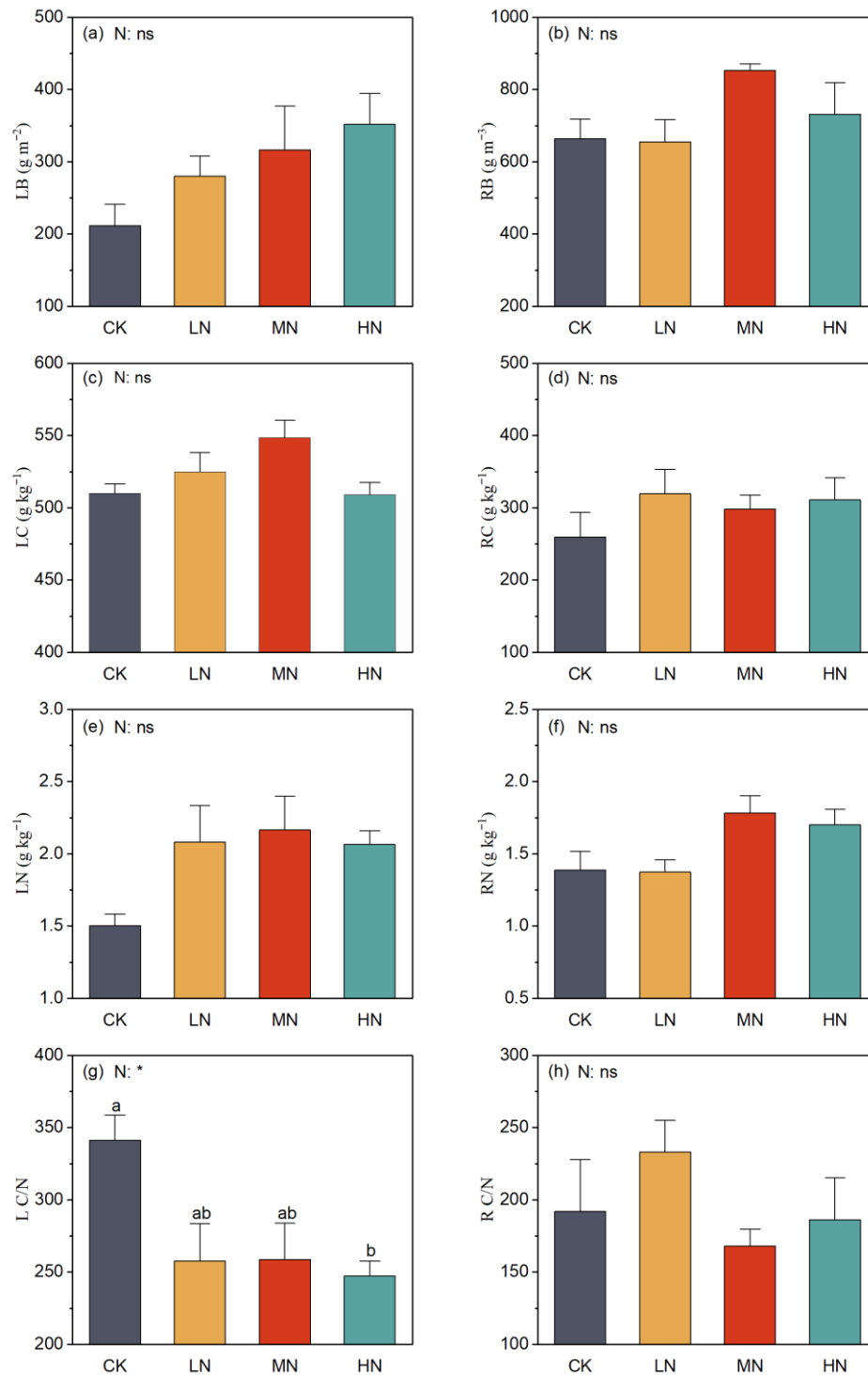


## Supplementary Materials



**Figure S1** Distributions of LB (a), LC (c), LN (e), LC/N (g), RB (b), RC (d), RN (f), RC/N (h) under different N enrichment levels. Different lowercase letters indicate the significant difference among N enrichment levels ( $p < 0.05$ ). LB, litter biomass. LC, litter organic carbon. LN, litter total nitrogen. LC/N, LC/LN ratio. RB, fine root biomass. RC, fine root organic carbon. RN, fine root total nitrogen. RC/N, RC/RN ratio. \*  $p < 0.05$ , ns non-significant.

**Table S1** Permutational multivariate analysis of variance (PERMANOVA) of soil aggregated-associated bacterial communities under different N enrichment levels. \*\*  $p < 0.01$ .

Pairwise comparison	R <sup>2</sup>	$p$	$p_{\text{adj}}$ (Benjamini)
CK vs. LN	0.076	0.065	0.065
CK vs. MN	0.101	0.002	0.003 **
CK vs. HN	0.153	0.001	0.002 **
LN vs. MN	0.092	0.003	0.004 **
LN vs. HN	0.137	0.001	0.002 **
MN vs. HN	0.115	0.001	0.002 **

**Table S2** Topological properties of soil aggregated-associated bacterial co-occurrence networks.

	CK	LN	MN	HN
Number of nodes	356	375	376	371
Number of edges	2090	1522	1351	1803
Average Degree	11.742	8.117	7.186	9.72
Average Weighted Degree	1.492	0.889	0.969	1.257
Network Diameter	9	12	11	10
Average Path length	3.771	4.324	4.370	3.982
Network density	0.033	0.021	0.019	0.026
Modularity	3.468	3.502	2.993	3.206
Average Clustering Coefficient	0.425	0.361	0.367	0.384