

## Supplementary Table

Table S1 Basic properties of soil, biochar, and organic fertilizer.

sample	pH	TN ( $\text{g} \cdot \text{kg}^{-1}$ )	TP ( $\text{g} \cdot \text{kg}^{-1}$ )	TK ( $\text{g} \cdot \text{kg}^{-1}$ )	SOC ( $\text{g} \cdot \text{kg}^{-1}$ )
Initial soil	4.42	0.48	0.25	17.64	5.19
Tea-seed shells biochar	8.24	5.13	3.75	46.35	332.51
tea meal organic fertilizer	7.2	5.54	4.55	32.65	421.33

Note: TN (g·kg<sup>-1</sup>): Total nitrogen; TP (g·kg<sup>-1</sup>): Total phosphorus; TK(g·kg<sup>-1</sup>): Total potassium; SOC (g·kg<sup>-1</sup>): soil organic carbon.

Table S2 Effects of plant-plant interactions and fertilization on seedling growth (two-way ANOVA).

		Above-ground biomass	Below-ground biomass	Plant height
Fertilization	F	238.76	16.14	4405.06
	P	<0.001	<0.001	<0.001
Planting method	F	61.90	6.56	286.52
	P	<0.001	<0.001	0.058
Fertilization * Planting method	F	2.92	0.86	417.48
	P	<0.001	<0.001	0.103

Table S3 Effects of plant-plant interactions and fertilization on soil properties (two-way ANOVA).

[illegible]

Planting method	F	165.539	72.062	8.405	5360.344	303.802	1738.281	32.54	42.03
	P	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001
Fertilization * Planting method	F	14.292	23.062	1.72	68.240	882.51	613.846	21.64	33.26
	P	<0.001	<0.001	0.159	<0.001	<0.001	<0.001	<0.001	<0.001

Note: SOC (g/kg): soil organic carbon; DOC (g/kg): dissolved organic carbon; MBC (mg/kg): soil microbial biomass;  $\text{NH}_4^+\text{-N}$  (mg/kg): ammonium nitrogen;  $\text{NO}_3^-\text{-N}$  (mg/kg): nitrate nitrogen; AP (g/kg): available phosphorus, AK (g/kg): available potassium.

Table S4 Effects of plant-plant interactions and fertilization on microbial diversity (two-way ANOVA).

		$\alpha$ diversity of bacteria	$\alpha$ diversity of fungi
Fertilization	F	0.517	0.772
	P	<0.001	0.052
Planting method	F	0.072	17.88
	P	<0.001	0.084
Fertilization * Planting method	F	0.078	5.65
	P	<0.001	<0.001