

Supplementary Materials

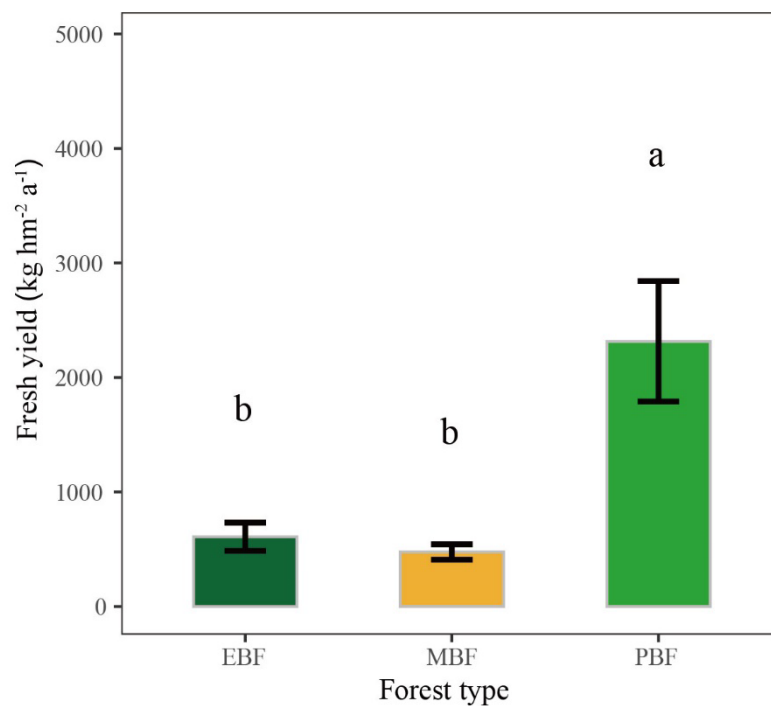


Figure S1. Fresh yields of bamboo shoots without sheaths in different bamboo forest types. Different lowercase letters indicate significant differences between different bamboo forest types ($p < 0.05$).

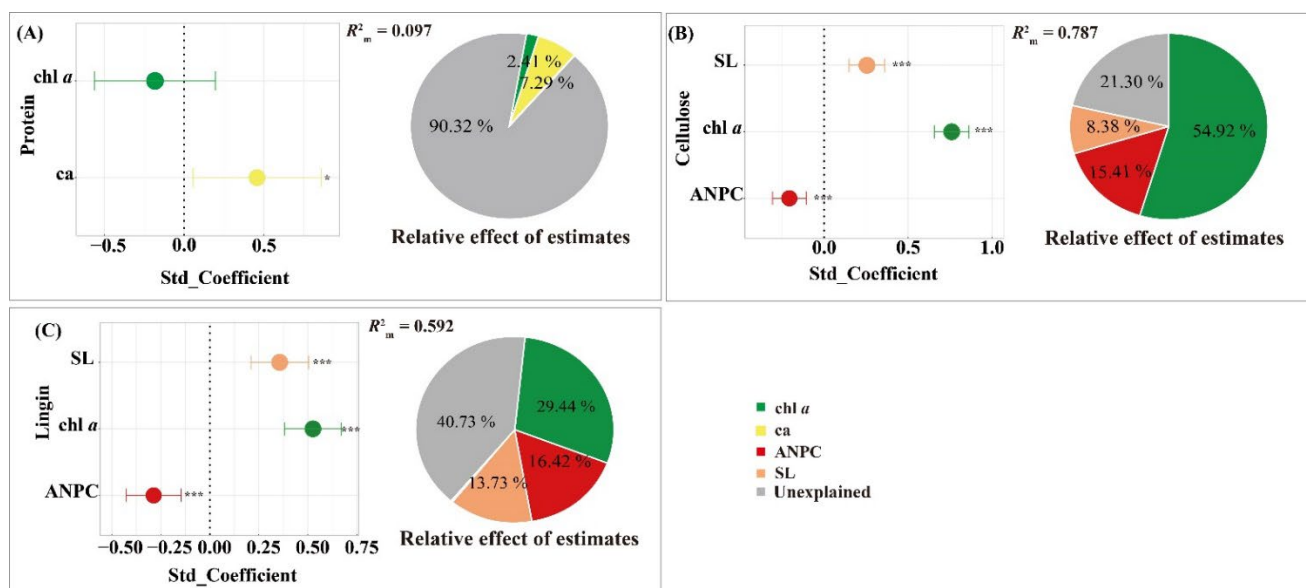


Figure S2. The linear mixed effect model of the effects of related factors on the nutritional (A: protein content) and taste quality (B: cellulose content; C: lignin content) of bamboo shoots (* for $p < 0.05$, *** for $p < 0.001$). Notes: chl a: chlorophyll a; ca: carotenoid; ANPC: parenchyma cell number in the axial system; SL: scattered light.

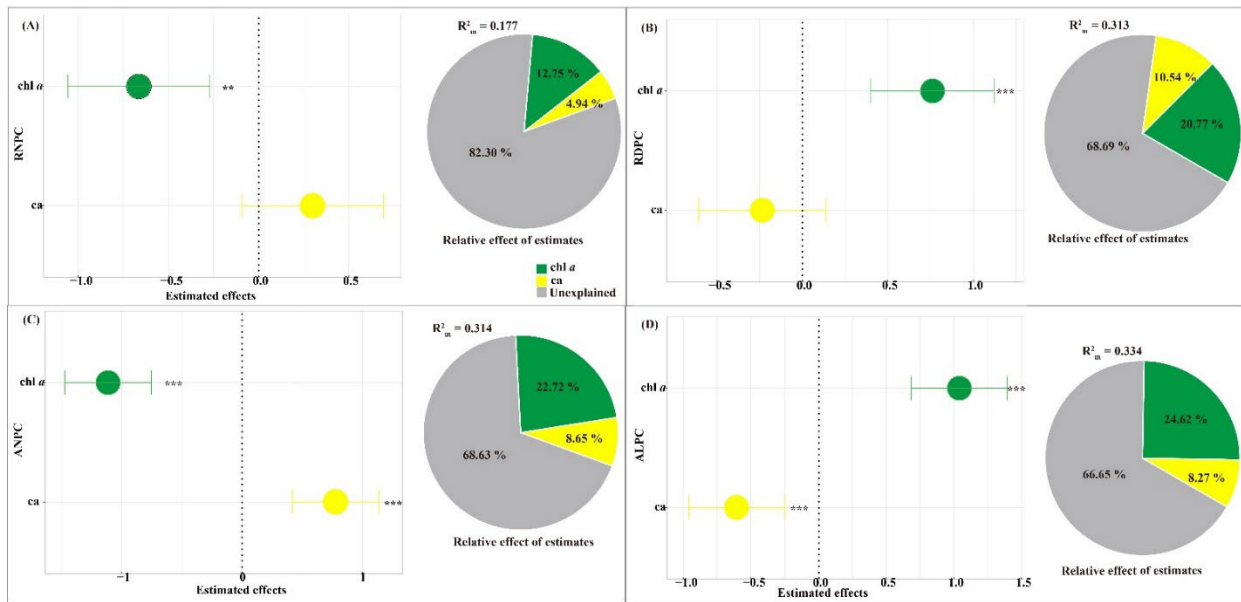


Figure S3. The linear mixed effect model of influencing factors and the parenchyma cell number in radial system (A), parenchyma cell diameter in radial system (B), parenchyma cell number in axial system (C) and parenchyma cell length in axial system (D) of bamboo shoots. (** for $p < 0.01$, *** for $p < 0.001$). Notes: chl *a*: chlorophyll *a*; ca: carotenoid.

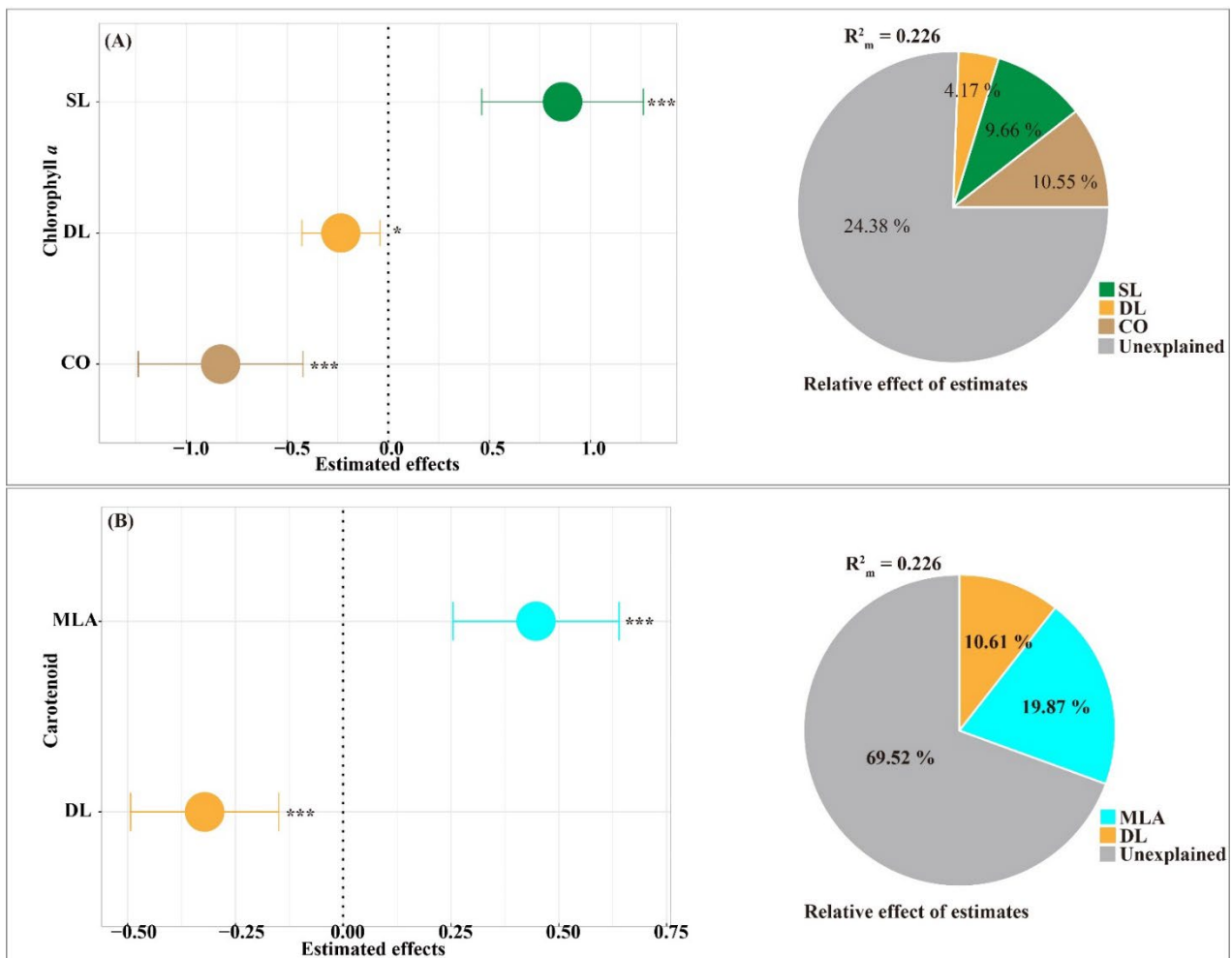


Figure S4. The line mixed effect model of influencing factors on chlorophyll *a* (A) and carotenoid (B) contents in bamboo shoots (* for $p < 0.05$, *** for $p < 0.001$). Notes: CO: canopy openness; MLA: mean leaf angle; DL: direct light; SL: scattered light.

Table S1. Coordinates, terrain and canopy trees characteristics of sample collection of bamboo shoots plots (means \pm SD).

Sites		Coordinates		Terrain			Information on canopy tree species				
Plot	Longitude (°)	Latitude (°)	Altitude (m)	Slope (°)	Aspect	Slope position	DBH (cm)	Height (cm)	Crown width 1 (m)	Crown width 2 (m)	Dominant species
E1	107.13708	29.02070	1359	15	North	Uphill	20.21 \pm 9.32	5.08 \pm 1.60	2.31 \pm 1.37	2.20 \pm 1.10	<i>Symplocos anomala</i>
E2	107.13695	29.02036	1351	12	North	Uphill	16.29 \pm 0.65	3.30 \pm 0.65	1.70 \pm 0.84	1.20 \pm 0.53	<i>Symplocos anomala</i>
E3	107.13695	29.02034	1353	20	North	Uphill	15.33 \pm 3.55	3.58 \pm 0.74	1.61 \pm 0.76	1.55 \pm 0.51	<i>Symplocos lancifolia</i>
E4	107.13687	29.02025	1356	23	North	Uphill	16.14 \pm 7.01	3.43 \pm 1.09	1.97 \pm 1.04	1.87 \pm 1.10	<i>Symplocos anomala</i>
E5	107.13679	29.02015	1367	22	North	Uphill	27.98 \pm 9.63	6.14 \pm 2.20	3.06 \pm 1.26	2.98 \pm 1.81	<i>Quercus myrsinifolia</i>
M1	107.13748	29.02039	1347	13	North	Uphill	14.18 \pm 1.94	3.78 \pm 0.26	1.38 \pm 0.37	1.16 \pm 0.39	<i>Euscaphis japonica</i>
M2	107.13750	29.02021	1342	17	North	Uphill	23.11 \pm 13.27	5.08 \pm 1.14	1.63 \pm 0.87	1.59 \pm 0.75	<i>Liquidambar formosana</i>
M3	107.13721	29.02008	1350	23	North	Uphill	29.77 \pm 12.11	6.23 \pm 2.25	1.87 \pm 1.63	2.23 \pm 1.88	<i>Platycarya strobilacea</i>
M4	107.13729	29.02016	1353	23	North	Uphill	18.45 \pm 6.19	4.07 \pm 0.91	1.63 \pm 0.61	1.28 \pm 0.53	<i>Carpinus turczaninowii</i>
M5	107.13708	29.02027	1347	22	North	Uphill	17.33 \pm 2.23	3.85 \pm 0.52	1.58 \pm 0.87	1.42 \pm 0.44	<i>Carpinus turczaninowii</i>
P1	107.13624	29.02039	1355	10	North	Uphill	2.71 \pm 0.19	4.50 \pm 0.34	0.66 \pm 0.17	0.67 \pm 0.10	<i>Chimonobambusa utilis</i>
P2	107.13635	29.02049	1355	10	North	Uphill	2.33 \pm 0.31	3.90 \pm 0.84	0.61 \pm 0.16	0.58 \pm 0.15	<i>Chimonobambusa utilis</i>
P3	107.13614	29.02039	1357	10	North	Uphill	2.05 \pm 0.41	2.75 \pm 0.64	0.71 \pm 0.15	0.74 \pm 0.09	<i>Chimonobambusa utilis</i>
P4	107.13686	29.01955	1355	12	North	Uphill	1.56 \pm 0.27	2.96 \pm 0.61	0.57 \pm 0.16	0.46 \pm 0.20	<i>Chimonobambusa utilis</i>
P5	107.13687	29.01967	1353	18	North	Uphill	1.92 \pm 0.42	2.72 \pm 0.47	0.59 \pm 0.11	0.48 \pm 0.06	<i>Chimonobambusa utilis</i>
P6	107.13682	29.01943	1349	17	North	Uphill	1.66 \pm 0.20	4.03 \pm 0.76	0.75 \pm 0.08	0.67 \pm 0.07	<i>Chimonobambusa utilis</i>