

Table S1. Soil physicochemical properties in four urban forest types in the dormant season

Soil layer (cm)	Forest type	pH	EC ($\mu\text{S}/\text{cm}$)	SWC (%)	SOC (g/kg)	TN(g/kg)	TP(mg/g)
0-10	PM	5.37 \pm 0.58ab	77.17 \pm 45.18a	24.64 \pm 6.10b	17.87 \pm 9.86c	1.14 \pm 0.52c	0.12 \pm 0.05b
	QA	4.61 \pm 0.19c	50.46 \pm 15.88b	27.05 \pm 3.27b	22.88 \pm 8.84b	1.58 \pm 0.45b	0.19 \pm 0.05a
	LF	4.98 \pm 0.48b	52.67 \pm 6.54b	30.28 \pm 4.95a	24.85 \pm 10.31a	1.91 \pm 0.61a	0.22 \pm 0.05a
	DB	5.85 \pm 0.48a	61.85 \pm 23.41a	29.58 \pm 3.16a	21.94 \pm 5.59b	1.86 \pm 0.36a	0.18 \pm 0.03a
10-20	PM	5.54 \pm 0.76a	59.35 \pm 37.48a	30.01 \pm 4.54a	11.80 \pm 4.07c	0.87 \pm 0.22c	0.12 \pm 0.10c
	QA	4.85 \pm 0.36b	49.26 \pm 6.61b	25.60 \pm 8.95b	16.59 \pm 3.54b	1.27 \pm 0.28b	0.19 \pm 0.03ab
	LF	5.19 \pm 0.55a	52.53 \pm 15.06ab	28.89 \pm 4.37a	18.51 \pm 5.24a	1.58 \pm 0.32a	0.20 \pm 0.06a
	DB	5.86 \pm 0.52a	57.69 \pm 15.18a	30.14 \pm 4.37a	16.30 \pm 2.97b	1.54 \pm 0.19a	0.15 \pm 0.03b
20-30	PM	5.76 \pm 0.39ab	60.41 \pm 21.07a	32.48 \pm 4.22a	10.52 \pm 3.63c	0.81 \pm 0.22c	0.09 \pm 0.02b
	QA	5.18 \pm 0.48c	54.61 \pm 20.12b	26.32 \pm 5.38b	13.93 \pm 3.91b	1.15 \pm 0.26b	0.17 \pm 0.05a
	LF	5.46 \pm 0.53b	51.45 \pm 9.06b	29.77 \pm 5.66a	15.84 \pm 4.83a	1.44 \pm 0.27a	0.18 \pm 0.04a
	DB	6.02 \pm 0.47a	55.79 \pm 13.64ab	30.94 \pm 4.24a	14.18 \pm 4.01b	1.56 \pm 0.21a	0.14 \pm 0.04a

Note. PM, *Pinus massoniana*; QA, *Quercus acutissima*; LF, *Liquidambar formosana*; DB, secondary deciduous broadleaved forest. EC, Electrical conductivity; SWC, Soil water content; SOC, Soil organic carbon; TN, Total nitrogen; TP, Total P. The use of different letters to denote different groups indicates significant differences between their means at a significance level of $P<0.05$.

Table S2. Soil microbial biomass C, N in growing season and dormant season

Soil Layer(cm)	Forest type	Growing season		Dormant season	
		MBC(mg/kg)	MBN(mg/kg)	MBC(mg/kg)	MBN(mg/kg)
0-10	PM	38.404 \pm 14.179b	12.518 \pm 5.436b	26.888 \pm 15.006ab	8.366 \pm 4.506bc
	QA	13.329 \pm 7.024a	8.642 \pm 3.248a	22.134 \pm 11.480b	4.880 \pm 2.062c
	LF	26.048 \pm 12.906a	6.470 \pm 3.080a	36.834 \pm 12.417a	13.949 \pm 6.224a
	DB	26.459 \pm 17.326a	6.758 \pm 2.399a	33.997 \pm 17.631ab	13.317 \pm 7.169ab
10-20	PM	30.765 \pm 15.660c	7.959 \pm 4.184ab	23.540 \pm 11.917ab	5.642 \pm 2.629a
	QA	6.145 \pm 3.318b	7.024 \pm 1.734b	27.057 \pm 11.370ab	6.106 \pm 2.117a
	LF	7.907 \pm 3.210ab	8.641 \pm 2.135ab	34.444 \pm 13.639b	10.973 \pm 2.825b
	DB	17.046 \pm 10.519a	10.042 \pm 1.849a	21.908 \pm 12.796a	8.190 \pm 2.849a
20-30	PM	19.119 \pm 13.989b	6.545 \pm 4.642b	20.536 \pm 10.330ab	5.254 \pm 2.400a
	QA	5.334 \pm 2.906a	3.452 \pm 1.079a	27.217 \pm 13.872ab	6.238 \pm 1.829a
	LF	5.533 \pm 3.069a	4.232 \pm 1.859ab	32.077 \pm 12.654b	9.051 \pm 2.105b
	DB	14.068 \pm 10.536ab	3.807 \pm 1.762a	19.660 \pm 10.553a	6.464 \pm 2.031a

Note. Values with different lowercase letters (a, b, c) in the same row indicate significant differences ($P<0.05$) based on a One way ANOVA followed by Fisher's LSD test.

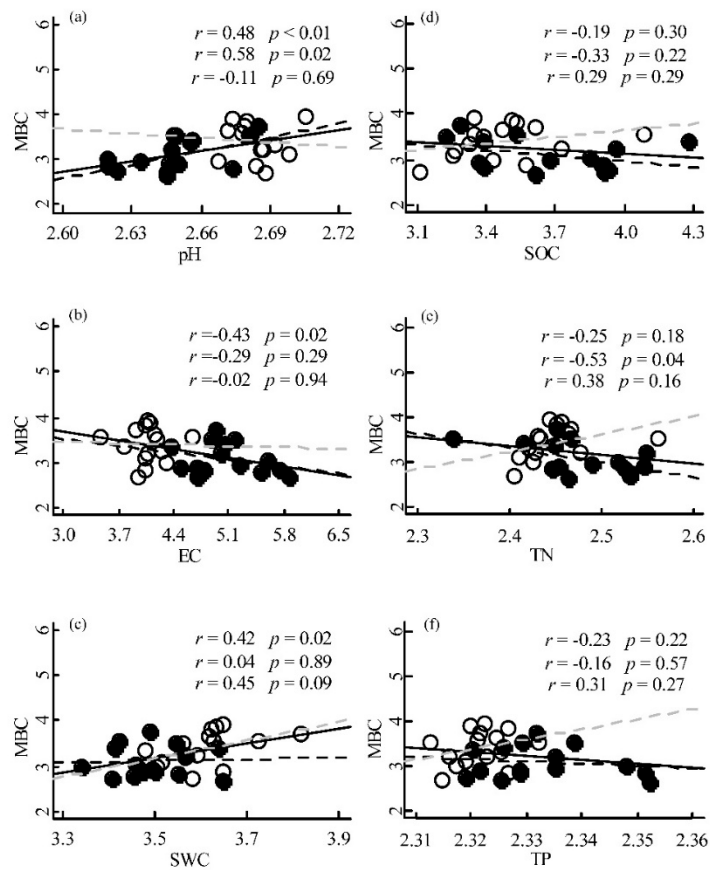


Figure S1. Linear relationships between soil physicochemical properties and soil MBC in *Quercus acutissima* plantation. **(a)** pH; **(b)** EC; **(c)** SWC; **(d)** SOC; **(e)** TN; and **(f)** TP. The solid line represents the regression line of all the data points from all seasons. The dashed line represents the regression line of the data points from the growing season. The gray dashed line represents the regression line of the data points from the dormant season. The open circles represent the data points from the growing season. The solid circles represent the data points from the dormant season.

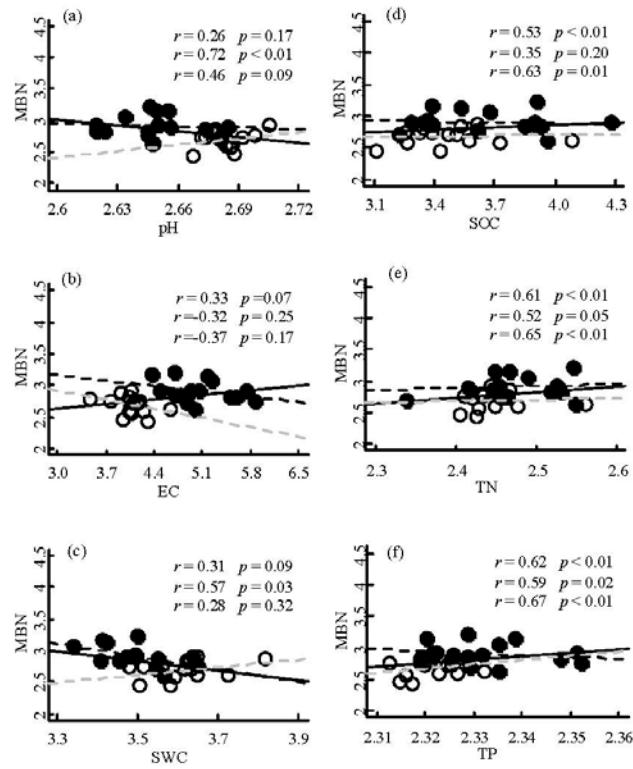


Figure S2. Linear relationships between soil physicochemical properties and soil MBN in *Quercus acutissima* plantation. (a) pH; (b) EC; (c) SWC; (d) SOC; (e) TN; and (f) TP.

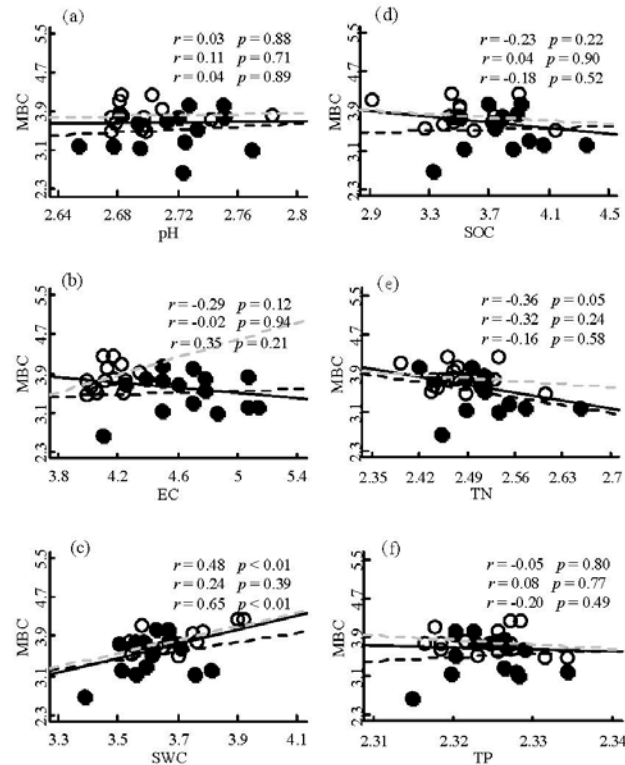


Figure S3. Linear relationships between soil physicochemical properties and soil MBC in *Liquidambar formosana* plantation. (a) pH; (b) EC; (c) SWC; (d) SOC; (e) TN; and (f) TP.

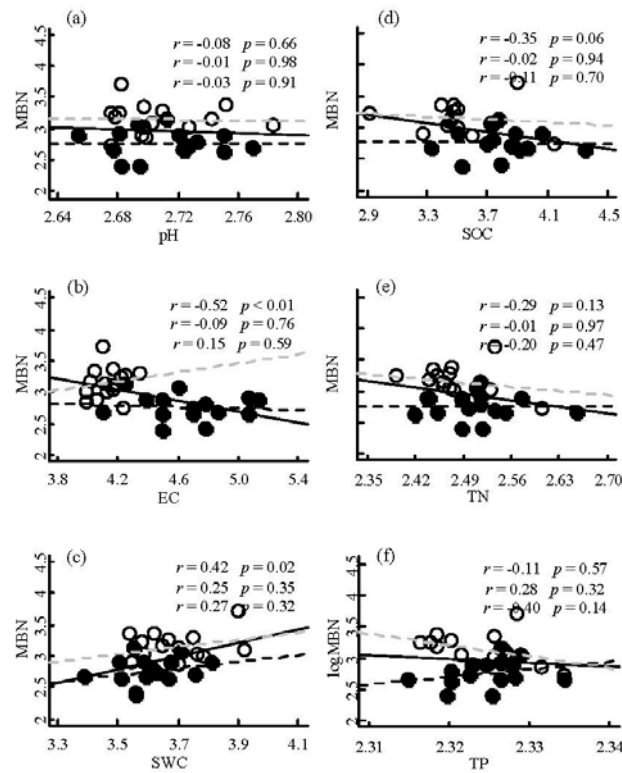


Figure S4. Linear relationships between soil physicochemical properties and soil MBN in *Liquidambar formosana* plantation. (a) pH; (b) EC; (c) SWC; (d) SOC; (e) TN; and (f) TP.

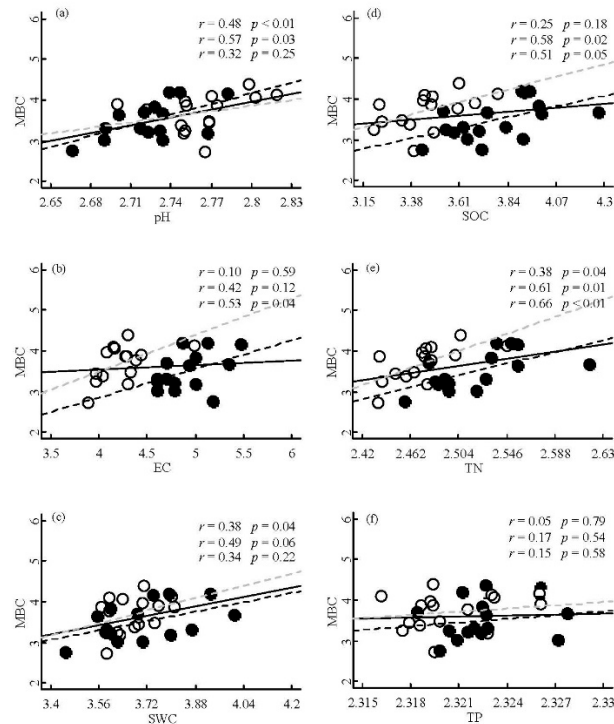


Figure S5. Linear relationships between soil physicochemical properties and soil MBC in secondary deciduous broadleaved forest. (a) pH; (b) EC; (c) SWC; (d) SOC; (e) TN; and (f) TP.

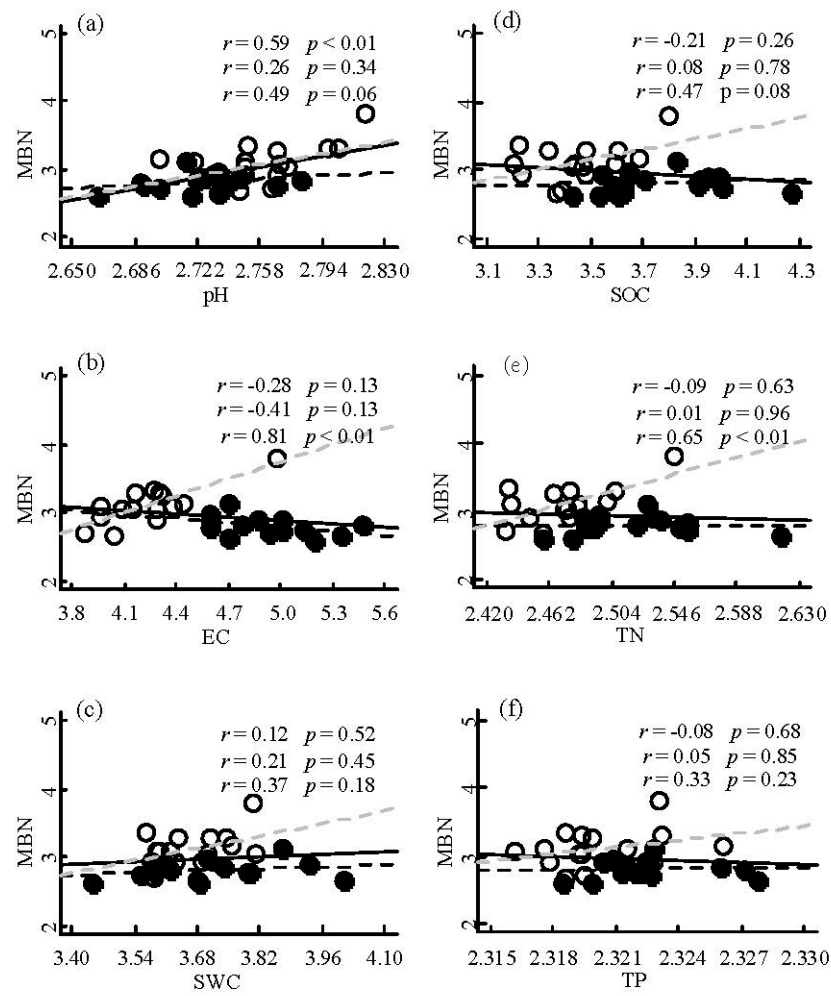


Figure S6. Linear relationships between soil physicochemical properties and soil MBN in secondary deciduous broadleaved forest. (a) pH; (b) EC; (c) SWC; (d) SOC; (e) TN; and (f) TP.