

Leaf functional traits are related to tree size and location in cotton trees *Bombax malabaricum*

Lingcong Liao¹²³, Huan Jiang⁴, Wenxing Long^{123*}, Hui Zhang^{123*}, Yikang Cheng¹, Xuanru Li¹²³,

Zhaoyuan Tan¹²³

¹College of Forestry, Hainan University, Haikou 570228

²Wuzhishan National Long Term Forest Ecosystem Research Station, Wuzhishan 572200;

³Key Laboratory of Ministry of Education for Genetics and Germplasm Innovation of Tropical Special

Trees and Ornamental Plants, Haikou 570228;

⁴Hainan Branch Institute of Medicinal Plant, Chinese Academy of Medical Sciences, Haikou 570311

Table S1 Characteristics of climate conditions in the five sample areas

Plot	Haikou	Danzhou	Qionghai	Qiongzhong	Baoting
Average annual temperature/°C	24.80	23.80	24.60	23.10	24.80
Average annual extreme minimum temperature/°C	8.70	7.40	9.10	6.10	8.60
mean annual precipitation/mm	1,646	1,857	2,054	2,388	2,163
Average air temperature in January/°C	18.40	17.90	18.80	17.40	20.20
Average air temperature in July /°C	29.10	27.90	28.90	27.00	27.60
Average annual wind speed/m/s	2.00	2.10	2.20	1.20	1.20
Mean annual humidity/%	82.00	82.00	84.00	85.00	82.00
Annual dryness index	0.81	0.74	0.65	0.49	0.6
annual sunshine hours/h	1,878	1,979	1,971	1,888	1,755

Table S2 The variation of functional traits of *Bombax malabaricum* at the diameters and geographical distributions

Functional traits	Diameters	Distributions	Within
GCL (per/mm ²)	8.06E-08	0.50	0.50
LE (μ m)	2.483E-07	0.82	0.18
LTh (μ m)	3.8825E-07	0.74	0.26

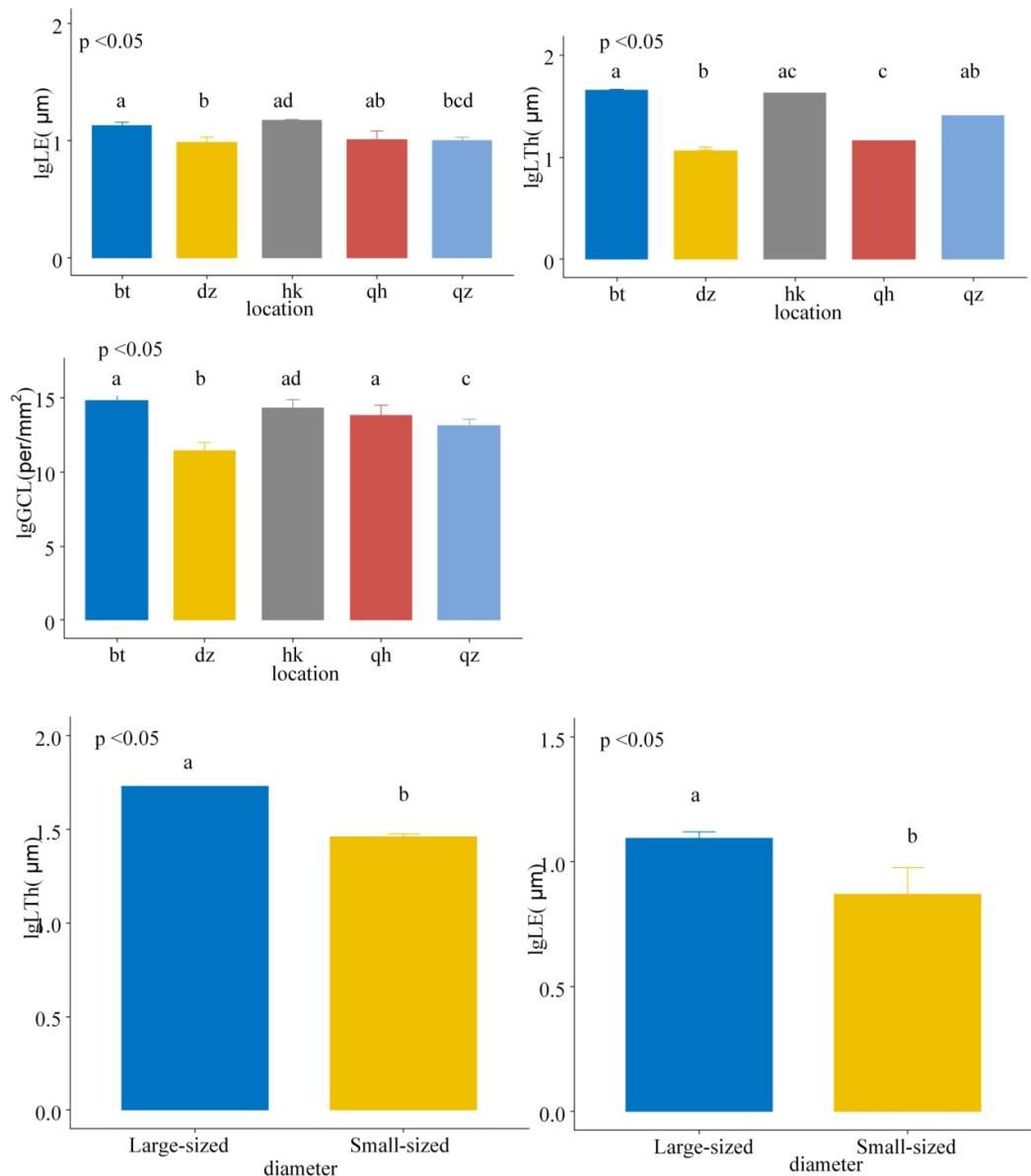


Figure S1 The variation of functional traits in different geographic distribution and diameters

GCL, guard cell length; LE, the thickness of lower epidermis; LTh, thickness of leaves.

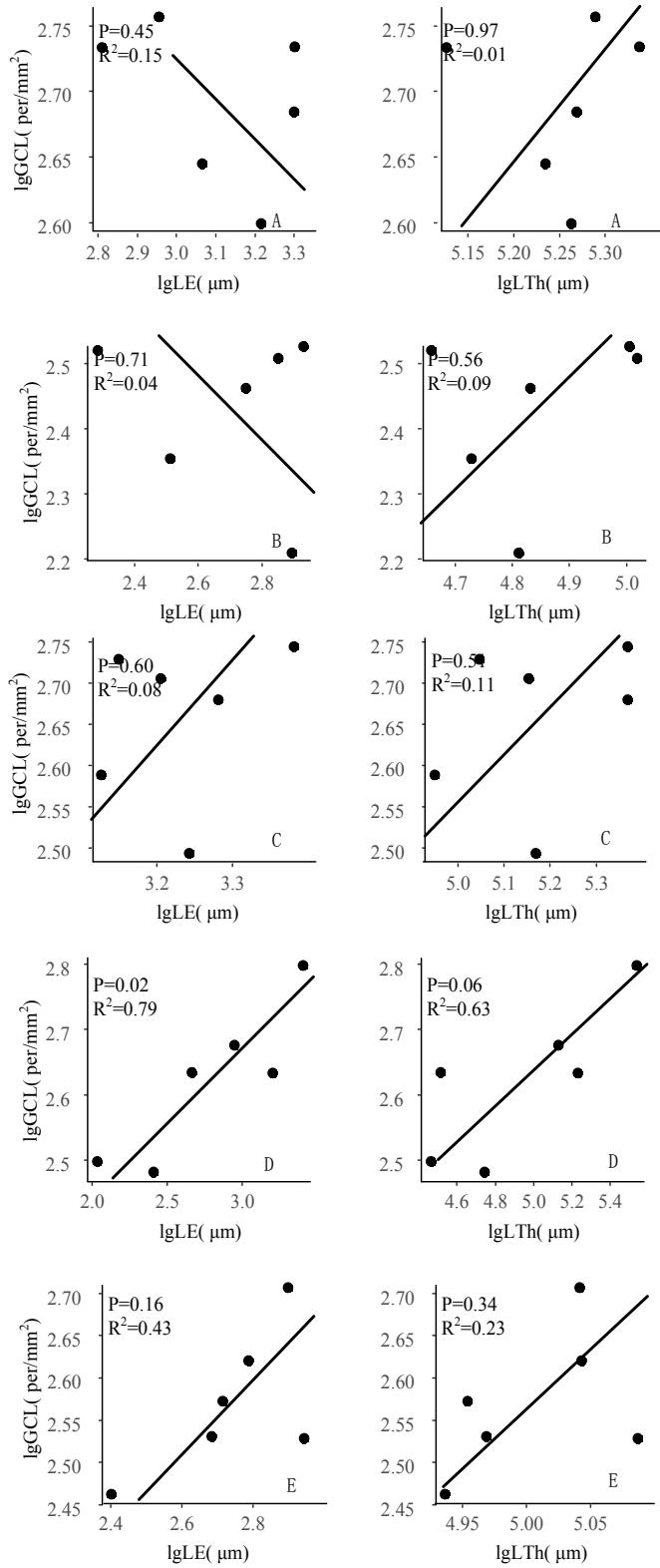


Figure S2 Standardized major axis of functional trait pairs of *Bombax malabaricum*.

A, Baoting; B, Danzhou; C, Haikou; D, Qionghai; E,Qiongzhong