Supplementary Information for

Improving the simulation accuracy of net ecosystem productivity of subtropical forests in China: Sensitivity analysis and parameter calibration based on the BIOME-BGC model

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Supplementary Table S1-S2, and References

Table S1 Photosynthesis-related parameters involved in sensitive analyses of the BIOME-BGC model.

Symbol	EBF	ENF	BAMBOO
Photosynthesis biophysics parameters			
FLNR	0.06 Biome-BGC V4.2	0.075 Iteration	0.06 Iteration
K_{o25}	248.0 [1]	248.0 [1]	248.0 [1]
R_{act25}	3.6 [1]	3.6 [1]	3.6 [1]
K_{c25}	404.0 [1]	404.0 [1]	404.0 [1]
Q_{10kc}	2.1 [1]	2.1 [1]	2.1 [1]
Q_{10ko}	1.2 [1]	1.2 [1]	1.2 [1]
Q_{10Ract}	2.4 [1]	2.4 [1]	2.4 [1]
Allocation of carbon parameters			
FRC:LC	1 Biome-BGC V4.2	1 [2]	1 [2]
LWC:TWC	0.1 Biome-BGC V4.2	0.1 [2]	0.1 [2]
SC:LC	2.2 Biome-BGC V4.2	2.2 Biome-BGC V4.2	1.0 [2]
CRS:SC	0.23 Biome-BGC V4.2	0.3 [2]	0.3 [2]
CGP	0.5 Biome-BGC V4.2	0.5 Biome-BGC V4.2	0.5 Biome-BGC V4.2
Canopy structure biophysics parameters			
W_{int}	0.045 Biome-BGC V4.2	0.033 [3]	0.033 [3]
$SLA_{shd:sun}$	2.0 Biome-BGC V4.2	2.0 [2]	2.0[2]
k	0. 5 Biome-BGC V4.2	0.58 [4]	0.9 Measured
SLA	15 [2]	15 [2]	15 Measured
$LAI_{all:proj}$	2.6 [2]	2.6 [2]	2.6 [2]
Stomatal conductance biophysics parameters			
G_{smax}	0.003 Biome-BGC V4.2	0.0065 [5]	0.003 [2]
G_{bl}	0.08 [2]	0.08 [2]	0.08 [2]
LWP_f	-2.3 [2]	-2.3[2]	-2.3 [2]
LWP_i	-0.6 [2]	-0.6 [2]	-0.6 [2]
VPD_f	4100 [2]	4100 [2]	4100 [2]
VPD_i	930 [2]	930 [2]	930 [2]
G_{cut}	0.00001 [2]	0.00001[2]	0.00001[2]

Table S2 Respiratory-related and other physio-ecological parameters involved in sensitivity analysis of BIOME-BGC model.

Symbol	EBF	ENF	BAMBOO
Heterotrophic respiration biophysics parameters			
$C:N_{litter}$	93.0 [2]	93.0[2]	93.0 [2]
LWT	0.7 Biome-BGC V4.2	0.7 [6]	0.7 [2]
LFG	0.2 Biome-BGC V4.2	0.3 Biome-BGC V4.2	0.3 Biome-BGC V4.2
Maintenance respiration biophysics parameters			
MR_{pern}	0.218 Biome-BGC V4.2	0.218 Biome-BGC V4.2	0.218 Biome-BGC V4.2
$C:N_{leaf}$	42.0 Biome-BGC V4.2	42.0 [2]	41.73 [7]
$C:N_{fr}$	42.0 Biome-BGC V4.2	42.0 [2]	42.0 [2]
$C:N_{dw}$	729.0 [2]	729.0 [2]	729.0 [2]
$C:N_{lw}$	50.0 [2]	50.0 [2]	50.0 [2]
Vegetation chemical parameters			
T_t	0.2 Biome-BGC V4.2	0.3 Biome-BGC V4.2	0.3 Biome-BGC V4.2
L_{lab}	0.32 [8]	0.49 [8]	0.32 [9]
L_{lig}	0.3 Biome-BGC V4.2	0.3 Biome-BGC V4.2	0.24 [9]
FR_{lab}	0.3 Biome-BGC V4.2	0.34 Biome-BGC V4.2	0.3 [9]
FR_{lig}	0.25 Biome-BGC V4.2	0.22 [10]	0.25 [9]
DW_{lig}	0.24 Biome-BGC V4.2	0.24 Biome-BGC V4.2	0.24 [9]
Management measure parameters			
P_{dsw}	-	-	0.1 Measured
P_{obtr_total}	-	-	7 Measured
SCR_{ages}	-	-	0 Measured
Fer	-	-	0.023 [11]
P_{dss}	-	-	0.5 Measured

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