

Figure S1. Seasonal variations of daily values of leaf area index (LAI).

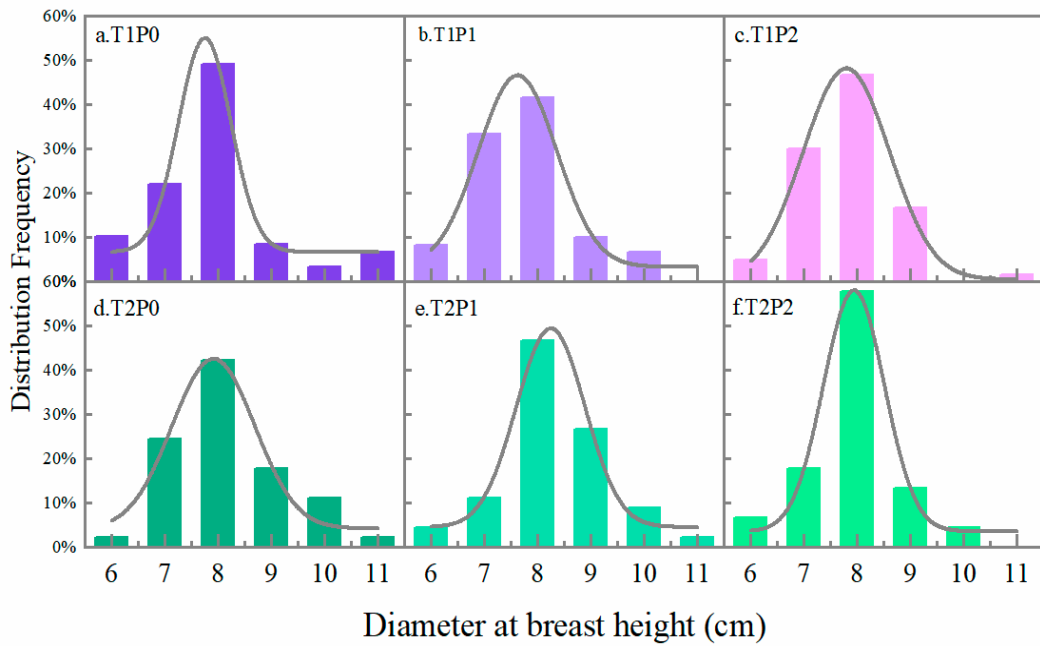


Figure S2. The frequency distribution of stem diameters at breast height (DBH) for T1P0, T1P1, T1P2, T2P0, T2P1, and T2P2 is presented in figures (a), (b), (c), (d), (e), and (f) respectively.

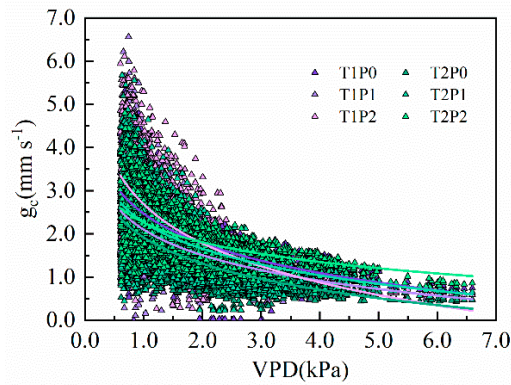


Figure S3. Logarithmic function of canopy conductance (g_c) and vapor pressure deficit (VPD) before BLA.

Table S1. Linear regression functional equation for transpiration rate per unit leaf area (E_L) and vapor pressure deficit ($\ln VPD$).

Treatments	$f(x)$	R^2	P
T1P0	$E_L = 0.60 \ln(VPD) + 1.14$	0.67	<0.001
T1P1	$E_L = 0.42 \ln(VPD) + 1.05$	0.60	<0.001
T1P2	$E_L = 0.45 \ln(VPD) + 1.10$	0.67	<0.001
T2P0	$E_L = 0.31 \ln(VPD) + 0.80$	0.67	<0.001
T2P1	$E_L = 0.46 \ln(VPD) + 1.04$	0.73	<0.001
T2P2	$E_L = 0.70 \ln(VPD) + 1.30$	0.90	<0.001

Table S2. Linear regression functional equation for transpiration rate per unit leaf area (E_L) and photosynthetic active radiation ($\ln PAR$).

Treatments	$f(x)$	R^2	P
T1P0	$E_L = 0.63 \ln(PAR) - 2.36$	0.70	<0.001
T1P1	$E_L = 0.39 \ln(PAR) - 1.10$	0.50	<0.001
T1P2	$E_L = 0.44 \ln(PAR) - 1.35$	0.62	<0.001
T2P0	$E_L = 0.29 \ln(PAR) - 0.82$	0.55	<0.001
T2P1	$E_L = 0.41 \ln(PAR) - 1.26$	0.56	<0.001
T2P2	$E_L = 0.60 \ln(PAR) - 2.03$	0.63	<0.001

Table S3. Linear regression functional equation for transpiration rate per unit leaf area (E_L) and reference evapotranspiration ($\ln ET_0$).

Treatments	$f(x)$	R^2	P
T1P0	$E_L = 0.74 \ln(ET_0) + 0.24$	0.77	<0.001
T1P1	$E_L = 0.38 \ln(ET_0) + 0.56$	0.39	<0.001
T1P2	$E_L = 0.44 \ln(ET_0) + 0.55$	0.49	<0.001
T2P0	$E_L = 0.29 \ln(ET_0) + 0.43$	0.43	<0.001
T2P1	$E_L = 0.40 \ln(ET_0) + 0.52$	0.44	<0.001
T2P2	$E_L = 0.63 \ln(ET_0) + 0.49$	0.57	<0.001

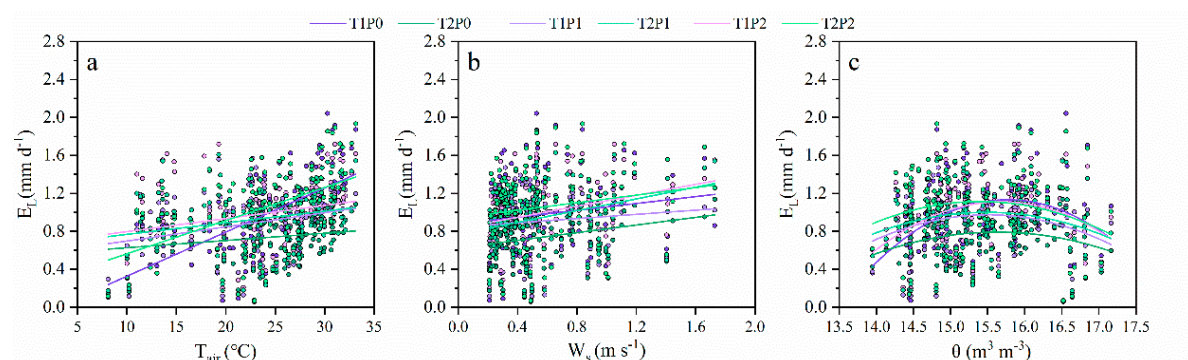


Figure S4 Response relationship between transpiration rate per unit leaf area (E_L) and air temperature (a, T_{air}), wind speed at 2 m height (b, W_s), soil water content (c, θ) at the depths of 20 cm soil layer for different treatments.

Table S4. Linear regression functional equation for transpiration rate per unit leaf area (E_L) and air temperature (T_{air}).

Treatments	$f(x)$	R^2	P
T1P0	$E_L = 0.046T_{air} - 0.14$	0.42	<0.001
T1P1	$E_L = 0.015T_{air} + 0.55$	0.08	<0.05
T1P2	$E_L = 0.014T_{air} + 0.66$	0.05	<0.05
T2P0	$E_L = 0.008T_{air} + 0.55$	0.03	<0.05
T2P1	$E_L = 0.012T_{air} + 0.65$	0.04	<0.05
T2P2	$E_L = 0.035T_{air} + 0.21$	0.27	<0.001

Table S5. Linear regression functional equation for transpiration rate per unit leaf area (E_L) and wind speed (W_s).

Treatments	$f(x)$	R^2	P
T1P0	$E_L = 0.18W_s + 0.88$	0.018	0.126
T1P1	$E_L = 0.11W_s + 0.85$	0.013	0.207
T1P2	$E_L = 0.29W_s + 0.83$	0.070	<0.05
T2P0	$E_L = 0.20W_s + 0.62$	0.070	<0.05
T2P1	$E_L = 0.31W_s + 0.77$	0.083	0.001
T2P2	$E_L = 0.20W_s + 0.94$	0.025	0.074

Table S6. Linear regression functional equation for transpiration rate per unit leaf area (E_L) and soil water content (θ).

Treatments	$f(x)$	R^2	P
T1P0	$E_L = 6.67\theta - 0.21\theta^2 - 51.44$	0.12	<0.001
T1P1	$E_L = 3.54\theta - 0.11\theta^2 - 26.47$	0.04	0.067
T1P2	$E_L = 5.60\theta - 0.18\theta^2 - 42.81$	0.10	0.001
T2P0	$E_L = 2.67\theta - 0.09\theta^2 - 20.10$	0.04	0.061
T2P1	$E_L = 3.03\theta - 0.10\theta^2 - 22.43$	0.03	0.187
T2P2	$E_L = 3.43\theta - 0.11\theta^2 - 25.32$	0.03	0.189

Table S7. Logarithmic function of canopy conductance (g_c) and vapor pressure deficit (VPD) and their function after the boundary line analysis (BLA).

Treatments	Before BLA	R^2	P	After BLA	R^2	P
T1P0	$g_c = 2.57 - 1.21\ln(\text{VPD})$	0.53	<0.0001	$g_c = 3.43 - 1.52\ln(\text{VPD})$	0.96	<0.0001
T1P1	$g_c = 2.13 - 0.99\ln(\text{VPD})$	0.41	<0.0001	$g_c = 2.87 - 1.37\ln(\text{VPD})$	0.97	<0.0001
T1P2	$g_c = 2.84 - 1.56\ln(\text{VPD})$	0.59	<0.0001	$g_c = 3.79 - 1.99\ln(\text{VPD})$	0.91	<0.0001
T2P0	$g_c = 2.01 - 1.06\ln(\text{VPD})$	0.49	<0.0001	$g_c = 2.86 - 1.50\ln(\text{VPD})$	0.94	<0.0001
T2P1	$g_c = 2.38 - 1.10\ln(\text{VPD})$	0.48	<0.0001	$g_c = 3.26 - 1.53\ln(\text{VPD})$	0.97	<0.0001
T2P2	$g_c = 2.29 - 0.80\ln(\text{VPD})$	0.48	<0.0001	$g_c = 2.98 - 1.14\ln(\text{VPD})$	0.97	<0.0001

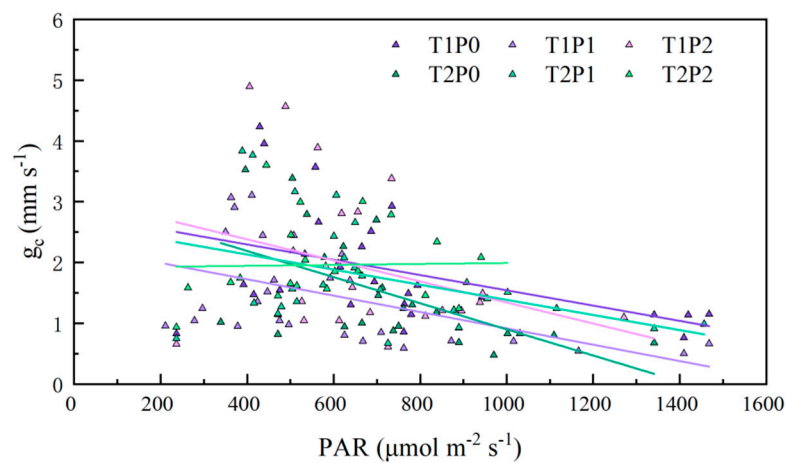


Figure S5. Response relationship between canopy conductance (g_c) and photosynthetic active radiation (PAR) for different treatments.

Table S8. Linear regression functional equation for canopy conductance (g_c) and photosynthetic active radiation (PAR).

Treatments	$f(x)$	R^2	P
T1P0	$g_c = -0.0013 \text{ PAR} + 2.80$	0.20	0.023
T1P1	$g_c = -0.0014 \text{ PAR} + 2.26$	0.28	0.004
T1P2	$g_c = -0.0017 \text{ PAR} + 3.07$	0.13	0.083
T2P0	$g_c = -0.0022 \text{ PAR} + 3.05$	0.33	0.004
T2P1	$g_c = -0.0012 \text{ PAR} + 2.63$	0.16	0.053
T2P2	$g_c = -0.0010 \text{ PAR} + 1.91$	0.00	0.907