

Table S1. Correlation analysis between leaf traits and climatic factors.

	Longitude	Latitude	Altitude	Annual rainfall	Annual relative humidity	Annual temperature	Frost-free period	Light days
FW	0.414	0.068	-0.371	0.098	0.272	0.249	-0.338	0.176
DW	0.421	0.066	-0.3	0.051	0.500	0.206	-0.349	0.206
LL	0.433	0.229	-0.547	0.041	-0.126	0.226	-0.384	0.094
LW	0.329	0.052	-0.406	0.215	0.322	0.257	-0.256	0.113
LT	0.591*	0.477	-0.600*	-0.185	0.265	-0.069	-0.592*	0.184
LA	0.325	0.045	-0.420	0.195	0.236	0.246	-0.259	-0.049
PL	0.236	-0.176	-0.034	0.148	0.211	0.095	-0.009	0.496
LBA	0	-0.139	-0.007	0.313	0.146	0.268	0.113	0.078
LWR	0.458	0.467	-0.577*	-0.298	0.028	0.069	-0.478	-0.406

*, $P < 0.05$

Table S2. Information on SNP loci associated with the leaf traits.

No.	Chr.	Position	Major	Minor	MAF	Trait
SNP 1	Chr. 1	653407383	A	G	0.19	FW
SNP 2	Chr. 1	329802259	G	T	0.31	FW, DW
SNP 3	Chr. 1	325310555	C	A	0.30	LL
SNP 4	Chr. 2	128834616	C	T	0.06	T
SNP 5	Chr. 2	180870775	G	T	0.16	LA
SNP 6	Chr. 2	503986091	A	T	0.14	LCD
SNP 7	Chr. 3	474775171	T	C	0.50	FW
SNP 8	Chr. 5	385039508	G	T	0.08	FW, DW
SNP 9	Chr. 5	299221419	T	C	0.13	LW, LA
SNP 10	Chr. 5	87047307	C	T	0.05	LCD
SNP 11	Chr. 5	87078717	G	A	0.05	LCD
SNP 12	Chr. 5	87369397	C	A	0.05	LCD
SNP 13	Chr. 6	186059721	G	A	0.21	T
SNP 14	Chr. 6	435653798	G	A	0.06	LCD
SNP 15	Chr. 7	631466137	T	A	0.17	LW
SNP 16	Chr. 7	631214933	G	A	0.15	LW
SNP 17	Chr. 8	99490954	G	A	0.06	LBA
SNP 18	Chr. 8	100114220	C	A	0.07	LBA
SNP 19	Chr. 8	69440895	C	A	0.05	LCD
SNP 20	Chr. 9	461048418	C	A	0.06	LW
SNP 21	Chr. 9	463063980	G	T	0.35	LW
SNP 22	Chr. 9	463266035	G	T	0.14	LW, LA
SNP 23	Chr. 9	23793644	T	G	0.09	T
SNP 24	Chr. 10	288332022	G	A	0.45	LCD
SNP 25	Chr. 12	451114175	G	T	0.05	LL, LCD
SNP 26	Chr. 12	451384229	T	C	0.06	LL
SNP 27	Chr. 12	451988693	A	G	0.05	LL, LCD
SNP 28	Chr. 12	447512684	C	A	0.05	LL, LCD
SNP 29	Chr. 12	446382735	G	A	0.05	LL

MAF: Minimum allele frequency

Table S3. Information on the genes related to leaf traits.

Position	Genes	Number	Trait
Chr.1	Gb_14716, Gb_14717, Gb_14718, Gb_14732, Gb_14733	5	FW
	Gb_38577	1	FW, DW
	Gb_24923, Gb_24924, Gb_24930, Gb_07471	4	LL
Chr.2	Gb_23926, Gb_23927	2	LA
	Gb_22428, Gb_22429, Gb_22430	3	LWR
Chr.3	Gb_16176, Gb_16184, Gb_16183, Gb_16175, Gb_16174, Gb_16182	6	FW
Chr.5	Gb_07046, Gb_07047, Gb_07048, Gb_23845, Gb_23846, Gb_32368	6	FW, DW
	Gb_06189, Gb_06190, Gb_20962, Gb_20963, Gb_20964, Gb_20965, Gb_20966, Gb_20967, Gb_20969, Gb_20970	10	LWR
	Gb_07535, Gb_07536, Gb_07537, Gb_07538, Gb_07539, Gb_07540	6	LW, LA
Chr.6	Gb_11455, Gb_26569, Gb_26570, Gb_26571, Gb_26572, Gb_26573, Gb_26574, Gb_26575, Gb_26576, Gb_26577, Gb_26578, Gb_26581, Gb_26582	13	LWR
	Gb_26689, Gb_32934, Gb_32935, Gb_32936, Gb_33508, Gb_33509, Gb_33510	7	LT
Chr.7	Gb_07127, Gb_07133, Gb_07134, Gb_07135	4	LW
Chr.8	Gb_31092, Gb_31094, Gb_31093, Gb_31095, Gb_31100, Gb_31101, Gb_31102, Gb_31103, Gb_31104, Gb_31105, Gb_31106	11	LBA
	Gb_22260, Gb_22259, Gb_22258, Gb_22257, Gb_22255, Gb_22270, Gb_22256	7	LWR
Chr.9	Gb_21434, Gb_21435, Gb_23126, Gb_23127, Gb_23130	5	LW
	Gb_08606, Gb_17294, Gb_17295, Gb_17296, Gb_17297, Gb_23123	6	LW, LA
	Gb_07578, Gb_07579, Gb_07580, Gb_07581, Gb_07582, Gb_04105, Gb_04106	7	LT
Chr.10	Gb_28311, Gb_11667, Gb_29243	3	LWR
Chr.12	Gb_07853, Gb_07854, Gb_07855, Gb_07856, Gb_38804, Gb_22201	6	LL, LWR
Total		112	