

**Table S1.** List of leaf functional trait indicators analyzed in this paper and their descriptions.

	Leaf functional traits	Abbreviation	Unit	Description
Leaf morphological traits	Leaf area	LA	cm <sup>2</sup>	Light capture.
	Leaf thickness	LT	mm	Water use efficiency of leaves; leaf stomatal behavior.
	Leaf fresh mass	LFM	g	Growth strategy and response to environmental variations in leaves.
	Leaf dry mass	LDM	g	Growth strategy and response to environmental variations in leaves.
	Leaf volume	LV	cm <sup>3</sup>	Leaf growth and development.
	Specific leaf area	SLA	cm <sup>2</sup> g <sup>-1</sup>	Light capture, relative growth rate and plant tolerance.
	Leaf tissue density	LTD	g cm <sup>-3</sup>	Relates to photosynthesis, resistance and defense.
	Leaf dry matter content	LDMC	g g <sup>-1</sup>	The ratio of dry mass to fresh mass; plant resistance.
	Leaf mass fraction	LMF	g g <sup>-1</sup>	Biomass of the plant allocated to leaves for light capture.
Leaf physiological traits	Leaf nitrogen content	LNC	g kg <sup>-1</sup>	Nitrogen nutrition and photosynthesis in plants.
	Net photosynthetic rate	Pn	μmol m <sup>-2</sup> s <sup>-1</sup>	Organic matter accumulation and plant growth.
	photosynthetic N use sufficiency	PNUE	μmol g <sup>-1</sup> s <sup>-1</sup>	The extent to which photosynthesis utilizes nitrogen.
	Stomatal conductance	gs	mol m <sup>-2</sup> s <sup>-1</sup>	Balance of carbon uptake and water loss in leaves.
	Transpiration rate	Tr	μmol m <sup>-2</sup> s <sup>-1</sup>	Water utilization and protection of leaves.
	Intercellular CO <sub>2</sub> concentration	Ci	μmol mol <sup>-1</sup>	Photosynthetic efficiency; the response to adversity.
	Water use efficiency	WUE	μmol mol <sup>-1</sup>	Response to adversity.
	Carboxylation efficiency of rubisco	CE	mol m <sup>-2</sup> s <sup>-1</sup>	Photosynthetic efficiency.
	Chlorophyll a	Chl a	mg g <sup>-1</sup>	Main photosynthetic pigments.
	Chlorophyll b	Chl b	mg g <sup>-1</sup>	Main photosynthetic pigments.
	Total amount of leaf chlorophyll content	Chl (a+b)	mg g <sup>-1</sup>	Photosynthetic capacity of plants.
	Carotenoid content	Car	mg g <sup>-1</sup>	Accessory pigments; photosynthetic system protection.

**Table S2.** Effects of cultivation pattern, N addition, and their interactions on the leaf traits of *Eucalyptus urophylla*  $\times$  *E. grandis* and *D. odorifera*.

Species	Leaf traits	Cultivation pattern (C), d.f. =1	Nitrogen addition (N), d.f. =3	C $\times$ N, d.f. = 3
		<i>F</i>	<i>F</i>	<i>F</i>
<i>Eucalyptus urophylla</i> $\times$ <i>E. grandis</i>	LA	12.90***	7.73***	13.90***
	LT	7.33**	59.04***	0.31 <sup>ns</sup>
	LV	2.42 <sup>ns</sup>	16.00***	10.04***
	LFM	0.13 <sup>ns</sup>	25.49***	2.91*
	LDM	13.15***	9.50***	38.08***
	LDMC	42.17***	49.12***	124.21***
	SLA	0.04 <sup>ns</sup>	12.32***	33.45***
	LTD	9.52**	25.38***	82.32***
	LMF	15.38***	20.55***	0.93 <sup>ns</sup>
	Pn	85.75***	153.52***	0.2 <sup>ns</sup>
	gs	0.62 <sup>ns</sup>	7.72**	0.82 <sup>ns</sup>
	Tr	19.68***	9.35***	2.09 <sup>ns</sup>
	Ci	13.70**	55.24***	1.52 <sup>ns</sup>
	WUE	31.44***	112.47***	5.17**
	CE	58.47***	122.40***	0.93 <sup>ns</sup>
	Chl a	0.88 <sup>ns</sup>	21.09***	2.53 <sup>ns</sup>
	Chl b	0.10 <sup>ns</sup>	24.73***	2.05 <sup>ns</sup>
	Chl a+b	0.97 <sup>ns</sup>	29.94***	2.73*
	Car	1.45 <sup>ns</sup>	37.85***	2.22 <sup>ns</sup>
	LNC	14.31**	175.30***	2.98*
<i>D. odorifera</i>	LA	428.63***	36.76***	7.35***
	LT	220.71***	17.37***	8.55***
	LV	966.05***	30.64***	2.30 <sup>ns</sup>
	LFM	450.89***	25.18***	3.51*
	LDM	415.20***	23.75***	2.56 <sup>ns</sup>
	LDMC	1.72 <sup>ns</sup>	18.98***	11.64***
	SLA	88.08***	7.57***	2.43 <sup>ns</sup>
	LTD	100.38***	21.62***	13.69***
	LMF	44.89***	14.24***	0.55 <sup>ns</sup>
	Pn	455.42***	14.98***	37.39***
	gs	9.04**	29.63***	7.65**
	Tr	24.14***	66.86***	10.71***
	Ci	46.13***	5.02**	6.38**
	WUE	104.16***	31.55***	2.83*
	CE	362.38***	19.04***	35.13***
	Chl a	59.71***	1.78 <sup>ns</sup>	5.40**
	Chl b	42.40***	5.75***	4.25**
	Chl a+b	62.84***	2.72*	4.86**
	Car	31.10***	1.56 <sup>ns</sup>	3.79*
	LNC	5.81*	12.88***	4.94**

The symbols "\*", \*\* and \*\*\*" indicate significant differences at the 0.05, 0.01 and 0.001 levels, respectively. Nonsignificant differences ( $P > 0.05$ ) between treatments are indicated by "ns".

**Table S3.** The r values and p values of Pearson's correlation analysis of leaf traits of *E. urophylla* × *E. grandis* in monoculture.

Leaf traits	LA	LT	LV	LFM	LDM	LDMC	SLA	LTD	LMF	Pn	gs	Tr	Ci	WUE	CE	LNC	PNUE	Chl a	Chl b	Chl a+b	Car
LA	–	–0.527	0.533	–0.064	0.315	0.371	0.322	–0.039	–0.245	0.226	0.226	0.415	–0.324	0.151	0.249	0.248	0.100	–0.066	0.039	–0.032	–0.011
LT	0.017	–	0.428	0.621	0.143	–0.342	–0.473	–0.128	0.293	–0.522	–0.206	–0.544	0.494	–0.444	–0.502	–0.488	–0.405	–0.396	–0.459	–0.425	–0.396
LV	0.015	0.060	–	0.574	0.466	0.026	–0.129	–0.178	0.072	–0.329	–0.029	–0.137	0.189	–0.327	–0.286	–0.259	–0.322	–0.499	–0.443	–0.491	–0.450
LFM	0.789	0.004	0.008	–	0.390	–0.395	–0.471	0.053	0.587	–0.529	–0.296	–0.649	0.483	–0.436	–0.524	–0.467	–0.509	–0.588	–0.688	–0.634	–0.633
LDM	0.176	0.547	0.038	0.089	–	0.689	–0.782	0.783	0.080	0.103	–0.164	–0.238	–0.168	0.185	0.092	0.245	–0.083	–0.169	–0.217	–0.188	0.020
LDMC	0.107	0.140	0.915	0.085	0.001	–	–0.405	0.731	–0.390	0.524	0.063	0.264	–0.551	0.533	0.512	0.611	0.319	0.303	0.332	0.320	0.529
SLA	0.167	0.035	0.588	0.036	0.000	0.077	–	–0.798	–0.265	0.038	0.318	0.485	–0.032	–0.087	0.057	–0.087	0.121	0.134	0.271	0.182	–0.001
LTD	0.869	0.589	0.452	0.825	0.000	0.000	0.000	–	0.068	0.330	–0.182	–0.177	–0.306	0.421	0.288	0.446	0.135	0.147	0.045	0.117	0.316
LMF	0.299	0.209	0.762	0.007	0.739	0.089	0.259	0.777	–	–0.739	–0.657	–0.541	0.734	–0.693	–0.772	–0.619	–0.754	–0.688	–0.748	–0.722	–0.731
Pn	0.339	0.018	0.157	0.016	0.666	0.018	0.874	0.155	0.000	–	0.699	0.568	–0.913	0.979	0.987	0.921	0.839	0.838	0.744	0.823	0.887
gs	0.338	0.383	0.905	0.205	0.490	0.791	0.172	0.442	0.002	0.001	–	0.499	–0.633	0.668	0.692	0.558	0.692	0.449	0.368	0.431	0.465
Tr	0.069	0.013	0.564	0.002	0.311	0.261	0.030	0.455	0.014	0.009	0.025	–	–0.633	0.395	0.604	0.461	0.449	0.432	0.493	0.461	0.438
Ci	0.163	0.027	0.425	0.031	0.479	0.012	0.892	0.189	0.000	0.000	0.003	0.003	–	–0.871	–0.948	–0.881	–0.742	–0.724	–0.623	–0.705	–0.814
WUE	0.526	0.050	0.160	0.054	0.435	0.016	0.716	0.065	0.001	0.000	0.001	0.085	0.000	–	0.953	0.923	0.835	0.825	0.706	0.802	0.883
CE	0.289	0.024	0.221	0.018	0.700	0.021	0.811	0.219	0.000	0.000	0.001	0.005	0.000	0.000	–	0.910	0.824	0.829	0.725	0.811	0.884
LNC	0.291	0.029	0.270	0.038	0.298	0.004	0.714	0.049	0.004	0.000	0.011	0.041	0.000	0.000	0.000	–	0.692	0.758	0.656	0.740	0.837
PNUE	0.674	0.076	0.166	0.022	0.729	0.171	0.611	0.571	0.000	0.000	0.001	0.047	0.000	0.000	0.000	0.001	–	0.748	0.661	0.734	0.730
Chl a	0.782	0.084	0.025	0.006	0.475	0.193	0.574	0.535	0.001	0.000	0.047	0.057	0.000	0.000	0.000	0.000	0.000	–	0.911	0.990	0.949
Chl b	0.871	0.042	0.050	0.001	0.357	0.153	0.248	0.849	0.000	0.000	0.110	0.027	0.003	0.001	0.000	0.002	0.002	0.000	–	0.959	0.863
Chl a+b	0.892	0.062	0.028	0.003	0.426	0.170	0.442	0.624	0.000	0.000	0.058	0.041	0.001	0.000	0.000	0.000	0.000	0.000	0.000	–	0.939
Car	0.963	0.084	0.047	0.003	0.933	0.016	0.997	0.175	0.000	0.000	0.039	0.053	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	–

The data in the upper right corner indicate r-values and the data in the lower left corner indicate p-values.

**Table S4.** The t values and standard error of Pearson's correlation analysis of leaf traits of *E. urophylla* × *E. grandis* in monoculture.

Leaf traits	LA	LT	LV	LFM	LDM	LDMC	SLA	LTD	LMF	Pn	gs	Tr	Ci	WUE	CE	LNC	PNUE	Chl a	Chl b	Chl a+b	Car
LA	–	–2.633	2.674	–0.271	1.409	1.697	1.442	–0.167	–1.070	0.983	0.984	1.935	–1.455	0.647	1.092	1.088	0.428	–0.281	0.164	–0.138	–0.047
LT	0.200	–	2.009	3.358	0.614	–1.544	–2.279	–0.549	1.302	–2.600	–0.894	–2.752	2.409	–2.102	–2.462	–2.375	–1.881	–1.828	–2.191	–1.990	–1.828
LV	0.199	0.213	–	2.975	2.233	0.108	–0.551	–0.768	0.308	–1.476	–0.121	–0.588	0.816	–1.467	–1.267	–1.137	–1.443	–2.446	–2.096	–2.389	–2.137
LFM	0.235	0.185	0.193	–	1.796	–1.823	–2.265	0.225	3.076	–2.648	–1.316	–3.620	2.342	–2.057	–2.611	–2.241	–2.511	–3.088	–4.022	–3.475	–3.472
LDM	0.224	0.233	0.209	0.217	–	4.036	–5.326	5.344	0.339	0.439	–0.705	–1.041	–0.723	0.799	0.391	1.071	–0.351	–0.730	–0.945	–0.814	0.085
LDMC	0.219	0.221	0.236	0.217	0.171	–	–1.879	4.548	–1.795	2.607	0.269	1.161	–2.801	2.672	2.527	3.276	1.427	1.351	1.494	1.431	2.648
SLA	0.223	0.208	0.234	0.208	0.147	0.216	–	–5.625	–1.166	0.161	1.422	2.352	–0.138	–0.369	0.243	–0.372	0.518	0.573	1.195	0.785	–0.004
LTD	0.236	0.234	0.232	0.235	0.147	0.161	0.142	–	0.288	1.483	–0.786	–0.763	–1.365	1.968	1.274	2.116	0.577	0.632	0.193	0.498	1.413
LMF	0.229	0.225	0.235	0.191	0.235	0.217	0.227	0.235	–	–4.660	–3.702	–2.729	4.589	–4.075	–5.159	–3.347	–4.868	–4.024	–4.781	–4.430	–4.549
Pn	0.230	0.201	0.223	0.200	0.234	0.201	0.236	0.222	0.159	–	4.151	2.931	–9.490	20.442	25.801	10.064	6.552	6.513	4.718	6.152	8.137
gs	0.230	0.231	0.236	0.225	0.233	0.235	0.223	0.232	0.178	0.168	–	2.446	–3.468	3.811	4.065	2.855	4.068	2.134	1.681	2.026	2.226
Tr	0.214	0.198	0.233	0.179	0.229	0.227	0.206	0.232	0.198	0.194	0.204	–	–3.471	1.825	3.217	2.202	2.133	2.033	2.405	2.205	2.067
Ci	0.223	0.205	0.231	0.206	0.232	0.197	0.236	0.224	0.160	0.096	0.182	0.182	–	–7.509	–12.659	–7.913	–4.703	–4.457	–3.377	–4.220	–5.947
WUE	0.233	0.211	0.223	0.212	0.232	0.199	0.235	0.214	0.170	0.048	0.175	0.217	0.116	–	13.293	10.177	6.440	6.192	4.227	5.691	7.963
CE	0.228	0.204	0.226	0.201	0.235	0.203	0.235	0.226	0.150	0.038	0.170	0.188	0.075	0.072	–	9.317	6.173	6.298	4.463	5.885	8.018
LNC	0.228	0.206	0.228	0.208	0.229	0.187	0.235	0.211	0.185	0.092	0.196	0.209	0.111	0.091	0.098	–	4.064	4.936	3.690	4.666	6.480
PNUE	0.235	0.215	0.223	0.203	0.235	0.223	0.234	0.234	0.155	0.128	0.170	0.211	0.158	0.130	0.133	0.170	–	4.787	3.734	4.586	4.526
Chl a	0.235	0.216	0.204	0.191	0.232	0.225	0.234	0.233	0.171	0.129	0.211	0.213	0.163	0.133	0.132	0.154	0.156	–	9.361	30.336	12.728
Chl b	0.236	0.209	0.211	0.171	0.230	0.222	0.227	0.235	0.156	0.158	0.219	0.205	0.184	0.167	0.162	0.178	0.177	0.097	–	14.397	7.252
Chl a+b	0.236	0.213	0.205	0.182	0.231	0.223	0.232	0.234	0.163	0.134	0.213	0.209	0.167	0.141	0.138	0.159	0.160	0.033	0.067	–	11.624
Car	0.236	0.216	0.211	0.182	0.236	0.200	0.236	0.224	0.161	0.109	0.209	0.212	0.137	0.111	0.110	0.129	0.161	0.075	0.119	0.081	–

The data in the upper right corner indicate t-values and the data in the lower left corner indicate standard error.

**Table S5.** The r values and p values of Pearson's correlation analysis of leaf traits of *E. urophylla* × *E. grandis* in mixed culture.

Leaf traits	LA	LT	LV	LFM	LDM	LDMC	SLA	LTD	LMF	Pn	gs	Tr	Ci	WUE	CE	LNC	PNUE	Chl a	Chl b	Chl a+b	Car
LA	–	–0.183	0.757	0.678	0.636	0.148	–0.027	0.305	0.400	–0.152	0.092	–0.260	0.005	–0.033	–0.117	–0.071	–0.202	–0.156	–0.044	–0.105	–0.074
LT	0.440	–	0.499	0.515	0.562	0.179	–0.887	0.466	0.398	–0.325	–0.244	–0.319	0.371	–0.283	–0.285	–0.415	0.145	–0.383	–0.381	–0.420	–0.486
LV	0.000	0.025	–	0.935	0.935	0.262	–0.610	0.578	0.589	–0.323	–0.040	–0.418	0.224	–0.195	–0.262	–0.308	–0.078	–0.374	–0.259	–0.343	–0.358
LFM	0.001	0.020	0.000	–	0.909	0.044	–0.627	0.619	0.625	–0.317	0.006	–0.447	0.212	–0.168	–0.253	–0.325	–0.077	–0.393	–0.331	–0.386	–0.419
LDM	0.003	0.010	0.000	0.000	–	0.452	–0.773	0.826	0.678	–0.418	–0.100	–0.481	0.316	–0.302	–0.357	–0.418	–0.176	–0.453	–0.354	–0.399	–0.362
LDMC	0.534	0.450	0.265	0.855	0.046	–	–0.465	0.635	0.323	–0.341	–0.256	–0.187	0.298	–0.387	–0.325	–0.309	–0.234	–0.231	–0.142	–0.129	0.047
SLA	0.911	0.000	0.004	0.003	0.000	0.039	–	–0.804	–0.603	0.429	0.280	0.399	–0.416	0.376	0.382	0.486	0.042	0.515	0.484	0.496	0.464
LTD	0.191	0.038	0.008	0.004	0.000	0.003	0.000	–	0.665	–0.469	–0.192	–0.457	0.370	–0.399	–0.418	–0.476	–0.295	–0.461	–0.410	–0.385	–0.262
LMF	0.080	0.083	0.006	0.003	0.001	0.165	0.005	0.001	–	–0.814	–0.535	–0.697	0.642	–0.700	–0.763	–0.786	–0.098	–0.635	–0.723	–0.689	–0.633
Pn	0.523	0.162	0.165	0.173	0.067	0.141	0.059	0.037	0.000	–	0.689	0.790	–0.867	0.937	0.965	0.910	0.058	0.422	0.609	0.522	0.482
gs	0.698	0.301	0.866	0.982	0.676	0.276	0.232	0.417	0.015	0.001	–	0.451	–0.570	0.695	0.664	0.647	–0.005	0.200	0.328	0.281	0.269
Tr	0.268	0.171	0.067	0.048	0.032	0.429	0.082	0.043	0.001	0.000	0.046	–	–0.686	0.535	0.756	0.655	0.279	0.386	0.421	0.384	0.393
Ci	0.984	0.107	0.343	0.369	0.174	0.202	0.068	0.108	0.002	0.000	0.009	0.001	–	–0.819	–0.947	–0.874	0.100	–0.371	–0.570	–0.496	–0.461
WUE	0.890	0.227	0.409	0.480	0.196	0.092	0.102	0.081	0.001	0.000	0.001	0.015	0.000	–	0.903	0.887	–0.078	0.341	0.570	0.473	0.410
CE	0.624	0.224	0.265	0.282	0.123	0.162	0.097	0.067	0.000	0.000	0.001	0.000	0.000	0.000	–	0.899	0.044	0.419	0.608	0.524	0.487
LNC	0.766	0.069	0.186	0.162	0.067	0.185	0.030	0.034	0.000	0.000	0.002	0.002	0.000	0.000	0.000	–	–0.087	0.386	0.623	0.523	0.493
PNUE	0.394	0.541	0.745	0.748	0.459	0.322	0.859	0.207	0.682	0.809	0.983	0.234	0.675	0.744	0.854	0.714	–	0.358	0.092	0.151	0.156
Chl a	0.511	0.095	0.104	0.087	0.045	0.327	0.020	0.041	0.003	0.064	0.397	0.093	0.107	0.141	0.066	0.093	0.121	–	0.847	0.949	0.900
Chl b	0.853	0.097	0.270	0.154	0.126	0.550	0.031	0.073	0.000	0.004	0.158	0.064	0.009	0.009	0.004	0.003	0.698	0.000	–	0.939	0.881
Chl a+b	0.658	0.065	0.139	0.093	0.082	0.588	0.026	0.094	0.001	0.018	0.231	0.095	0.026	0.035	0.018	0.018	0.525	0.000	0.000	–	0.958
Car	0.756	0.030	0.121	0.066	0.116	0.843	0.039	0.265	0.003	0.032	0.251	0.087	0.041	0.073	0.029	0.027	0.512	0.000	0.000	0.000	–

The data in the upper right corner indicate r-values and the data in the lower left corner indicate p-values.

**Table S6.** The t values and standard error of Pearson's correlation analysis of leaf traits of *E. urophylla* × *E. grandis* in mixed culture.

Leaf traits	LA	LT	LV	LFM	LDM	LDMC	SLA	LTD	LMF	Pn	gs	Tr	Ci	WUE	CE	LNC	PNUE	Chl a	Chl b	Chl a+b	Car
LA	–	–0.790	4.915	3.915	3.495	0.634	–0.113	1.359	1.854	–0.651	0.394	–1.144	0.021	–0.141	–0.498	–0.303	–0.873	–0.670	–0.188	–0.450	–0.315
LT	0.232	–	2.441	2.547	2.881	0.773	–8.162	2.236	1.838	–1.459	–1.065	–1.426	1.694	–1.251	–1.259	–1.934	0.623	–1.761	–1.749	–1.964	–2.359
LV	0.154	0.204	–	11.172	11.222	1.151	–3.264	3.003	3.095	–1.446	–0.171	–1.951	0.973	–0.845	–1.150	–1.375	–0.331	–1.713	–1.137	–1.548	–1.629
LFM	0.173	0.202	0.084	–	9.231	0.185	–3.418	3.346	3.396	–1.418	0.023	–2.122	0.921	–0.721	–1.110	–1.457	–0.327	–1.813	–1.487	–1.774	–1.960
LDM	0.182	0.195	0.083	0.098	–	2.148	–5.173	6.214	3.917	–1.951	–0.425	–2.326	1.414	–1.342	–1.620	–1.953	–0.757	–2.157	–1.606	–1.843	–1.650
LDMC	0.233	0.232	0.227	0.235	0.210	–	–2.228	3.489	1.447	–1.539	–1.124	–0.809	1.324	–1.780	–1.457	–1.377	–1.019	–1.007	–0.609	–0.552	0.201
SLA	0.236	0.109	0.187	0.184	0.149	0.209	–	–5.731	–3.203	2.013	1.236	1.845	–1.942	1.723	1.753	2.360	0.180	2.549	2.346	2.425	2.224
LTD	0.224	0.209	0.192	0.185	0.133	0.182	0.140	–	3.777	–2.250	–0.830	–2.177	1.689	–1.849	–1.950	–2.294	–1.308	–2.203	–1.905	–1.771	–1.152
LMF	0.216	0.216	0.190	0.184	0.173	0.223	0.188	0.176	–	–5.938	–2.688	–4.125	3.551	–4.156	–5.016	–5.387	–0.416	–3.489	–4.436	–4.034	–3.471
Pn	0.233	0.223	0.223	0.224	0.214	0.222	0.213	0.208	0.137	–	4.028	5.468	–7.390	11.426	15.652	9.292	0.246	1.976	3.253	2.593	2.332
gs	0.235	0.229	0.236	0.236	0.235	0.228	0.226	0.231	0.199	0.171	–	2.144	–2.946	4.099	3.765	3.601	–0.022	0.868	1.472	1.240	1.187
Tr	0.228	0.223	0.214	0.211	0.207	0.232	0.216	0.210	0.169	0.144	0.210	–	–3.999	2.690	4.907	3.673	1.232	1.773	1.972	1.765	1.812
Ci	0.236	0.219	0.230	0.230	0.224	0.225	0.214	0.219	0.181	0.117	0.194	0.172	–	–6.054	–12.530	–7.630	0.426	–1.694	–2.942	–2.424	–2.203
WUE	0.236	0.226	0.231	0.232	0.225	0.217	0.218	0.216	0.168	0.082	0.170	0.199	0.135	–	8.924	8.170	–0.332	1.540	2.947	2.278	1.907
CE	0.234	0.226	0.227	0.228	0.220	0.223	0.218	0.214	0.152	0.062	0.176	0.154	0.076	0.101	–	8.733	0.187	1.958	3.253	2.611	2.367
LNC	0.235	0.214	0.224	0.223	0.214	0.224	0.206	0.207	0.146	0.098	0.180	0.178	0.115	0.109	0.103	–	–0.372	1.775	3.377	2.602	2.407
PNUE	0.231	0.233	0.235	0.235	0.232	0.229	0.235	0.225	0.235	0.235	0.236	0.226	0.235	0.235	0.235	0.235	–	1.625	0.394	0.648	0.669
Chl a	0.233	0.218	0.219	0.217	0.210	0.229	0.202	0.209	0.182	0.214	0.231	0.217	0.219	0.222	0.214	0.217	0.220	–	6.750	12.776	8.738
Chl b	0.235	0.218	0.228	0.222	0.220	0.233	0.206	0.215	0.163	0.187	0.223	0.214	0.194	0.194	0.187	0.184	0.235	0.125	–	11.628	7.903
Chl a+b	0.234	0.214	0.221	0.217	0.216	0.234	0.205	0.218	0.171	0.201	0.226	0.218	0.205	0.208	0.201	0.201	0.233	0.074	0.081	–	14.190
Car	0.235	0.206	0.220	0.214	0.220	0.235	0.209	0.227	0.182	0.207	0.227	0.217	0.209	0.215	0.206	0.205	0.233	0.103	0.111	0.068	–

The data in the upper right corner indicate t-values and the data in the lower left corner indicate standard error.

**Table S7.** The r values and p values of Pearson's correlation analysis of leaf traits of *D. odorifera* in monoculture.

Leaf traits	LA	LT	LV	LFM	LDM	LDMC	SLA	LTD	LMF	Pn	gs	Tr	Ci	WUE	CE	LNC	PNUE	Chl a	Chl b	Chl a+b	Car
LA	–	0.191	0.781	0.869	0.808	0.030	–0.087	0.129	0.143	–0.278	–0.265	–0.087	–0.016	–0.276	–0.216	–0.105	–0.182	–0.109	–0.162	–0.140	–0.077
LT	0.421	–	0.022	0.415	0.129	–0.388	–0.033	0.099	–0.482	–0.087	–0.064	–0.230	0.022	0.106	–0.072	–0.216	–0.021	0.217	0.208	0.254	0.313
LV	0.000	0.927	–	0.664	0.698	0.143	–0.102	–0.274	0.200	–0.464	–0.416	–0.201	0.120	–0.220	–0.384	–0.137	–0.424	–0.337	–0.403	–0.414	–0.262
LFM	0.000	0.069	0.001	–	0.892	–0.001	–0.351	0.346	0.137	–0.232	–0.185	–0.181	–0.070	–0.090	–0.165	–0.146	–0.264	–0.156	–0.189	–0.173	–0.088
LDM	0.000	0.587	0.001	0.000	–	0.420	–0.623	0.482	0.438	–0.304	–0.270	–0.172	0.021	–0.084	–0.242	–0.164	–0.268	–0.259	–0.256	–0.303	–0.196
LDMC	0.899	0.091	0.548	0.998	0.065	–	–0.759	0.468	0.613	–0.238	–0.247	–0.011	0.201	–0.070	–0.234	–0.097	–0.100	–0.184	–0.046	–0.230	–0.041
SLA	0.717	0.889	0.668	0.130	0.003	0.000	–	–0.734	–0.541	0.163	0.125	0.129	–0.078	–0.143	0.149	0.162	0.147	0.185	0.087	0.216	0.093
LTD	0.586	0.679	0.242	0.135	0.031	0.038	0.000	–	0.360	0.063	0.053	–0.047	–0.055	0.168	0.052	–0.104	0.083	0.026	0.143	0.059	0.025
LMF	0.548	0.032	0.398	0.565	0.053	0.004	0.014	0.119	–	–0.030	0.033	0.107	0.226	–0.063	–0.086	0.049	0.119	–0.185	–0.365	–0.274	–0.209
Pn	0.235	0.714	0.039	0.324	0.193	0.313	0.493	0.790	0.900	–	0.895	0.762	–0.741	–0.187	0.980	0.762	0.849	0.403	0.362	0.429	0.321
gs	0.259	0.790	0.068	0.435	0.249	0.294	0.601	0.823	0.890	0.000	–	0.867	–0.666	–0.447	0.864	0.801	0.763	0.324	0.289	0.354	0.253
Tr	0.716	0.330	0.396	0.445	0.467	0.965	0.589	0.843	0.655	0.000	0.000	–	–0.528	–0.741	0.714	0.818	0.763	0.393	0.383	0.391	0.407
Ci	0.946	0.926	0.614	0.768	0.931	0.395	0.744	0.819	0.337	0.000	0.001	0.017	–	0.160	–0.849	–0.573	–0.446	–0.048	–0.146	–0.106	–0.028
WUE	0.239	0.657	0.352	0.707	0.724	0.770	0.547	0.479	0.791	0.430	0.048	0.000	0.500	–	–0.160	–0.469	–0.319	–0.243	–0.281	–0.230	–0.334
CE	0.360	0.763	0.095	0.486	0.305	0.320	0.530	0.827	0.720	0.000	0.000	0.000	0.000	0.500	–	0.750	0.769	0.314	0.301	0.345	0.243
LNC	0.658	0.360	0.565	0.538	0.489	0.683	0.496	0.662	0.839	0.000	0.000	0.000	0.008	0.037	0.000	–	0.612	0.151	0.102	0.164	0.109
PNUE	0.441	0.930	0.063	0.261	0.253	0.674	0.536	0.729	0.617	0.000	0.000	0.000	0.049	0.170	0.000	0.004	–	0.521	0.433	0.526	0.436
Chl a	0.646	0.359	0.146	0.512	0.270	0.436	0.434	0.913	0.436	0.078	0.164	0.086	0.839	0.301	0.178	0.525	0.018	–	0.713	0.979	0.789
Chl b	0.494	0.380	0.078	0.425	0.277	0.847	0.714	0.548	0.114	0.117	0.216	0.095	0.538	0.230	0.197	0.668	0.056	0.000	–	0.759	0.797
Chl a+b	0.557	0.279	0.070	0.467	0.194	0.330	0.359	0.804	0.243	0.059	0.126	0.088	0.658	0.329	0.137	0.491	0.017	0.000	0.000	–	0.770
Car	0.748	0.179	0.264	0.712	0.408	0.863	0.695	0.918	0.377	0.168	0.282	0.075	0.908	0.150	0.301	0.648	0.055	0.000	0.000	0.000	–

The data in the upper right corner indicate r-values and the data in the lower left corner indicate p-values.

**Table S8.** The t values and standard error of Pearson's correlation analysis of leaf traits of *D. odorifera* in monoculture.

Leaf traits	LA	LT	LV	LFM	LDM	LDMC	SLA	LTD	LMF	Pn	gs	Tr	Ci	WUE	CE	LNC	PNUE	Chl a	Chl b	Chl a+b	Car
LA		0.823	5.300	7.434	5.818	0.129	-0.369	0.554	0.612	-1.228	-1.166	-0.370	-0.069	-1.219	-0.939	-0.450	-0.787	-0.467	-0.698	-0.598	-0.326
LT	0.231	–	0.093	1.937	0.554	-1.789	-0.142	0.420	-2.332	-0.372	-0.270	-1.002	0.094	0.451	-0.306	-0.939	-0.089	0.942	0.901	1.116	1.399
LV	0.147	0.236	–	3.772	4.131	0.613	-0.435	-1.209	0.865	-2.224	-1.942	-0.869	0.514	-0.956	-1.764	-0.587	-1.984	-1.520	-1.869	-1.929	-1.152
LFM	0.117	0.214	0.176	–	8.369	-0.003	-1.589	1.565	0.586	-1.014	-0.798	-0.781	-0.299	-0.382	-0.711	-0.627	-1.161	-0.669	-0.816	-0.743	-0.376
LDM	0.139	0.234	0.169	0.107	–	1.964	-3.382	2.335	2.070	-1.354	-1.190	-0.742	0.088	-0.359	-1.057	-0.706	-1.181	-1.139	-1.122	-1.348	-0.847
LDMC	0.236	0.217	0.233	0.236	0.214	–	-4.948	2.244	3.290	-1.039	-1.080	-0.045	0.872	-0.297	-1.023	-0.415	-0.428	-0.796	-0.195	-1.002	-0.175
SLA	0.235	0.236	0.234	0.221	0.184	0.153	–	-4.585	-2.729	0.699	0.533	0.550	-0.332	-0.614	0.641	0.695	0.630	0.800	0.372	0.941	0.398
LTD	0.234	0.235	0.227	0.221	0.206	0.208	0.160	–	1.636	0.270	0.227	-0.201	-0.232	0.723	0.222	-0.445	0.352	0.111	0.612	0.251	0.105
LMF	0.233	0.207	0.231	0.233	0.212	0.186	0.198	0.220	–	-0.128	0.140	0.454	0.985	-0.269	-0.364	0.207	0.508	-0.797	-1.662	-1.207	-0.907
Pn	0.226	0.235	0.209	0.229	0.225	0.229	0.233	0.235	0.236	–	8.536	4.993	-4.688	-0.808	20.808	4.992	6.809	1.868	1.649	2.016	1.436
gs	0.227	0.235	0.214	0.232	0.227	0.228	0.234	0.235	0.236	0.105	–	7.394	-3.786	-2.120	7.291	5.681	5.012	1.452	1.281	1.605	1.109
Tr	0.235	0.229	0.231	0.232	0.232	0.236	0.234	0.235	0.234	0.153	0.117	–	-2.638	-4.686	4.332	6.037	5.012	1.814	1.760	1.802	1.891
Ci	0.236	0.236	0.234	0.235	0.236	0.231	0.235	0.235	0.230	0.158	0.176	0.200	–	0.689	-6.831	-2.964	-2.112	-0.206	-0.628	-0.450	-0.117
WUE	0.227	0.234	0.230	0.235	0.235	0.235	0.233	0.232	0.235	0.232	0.211	0.158	0.233	–	-0.688	-2.252	-1.430	-1.065	-1.242	-1.003	-1.502
CE	0.230	0.235	0.218	0.232	0.229	0.229	0.233	0.235	0.235	0.047	0.119	0.165	0.124	0.233	–	4.813	5.101	1.402	1.340	1.558	1.064
LNC	0.234	0.230	0.233	0.233	0.233	0.235	0.233	0.234	0.235	0.153	0.141	0.136	0.193	0.208	0.156	–	3.287	0.648	0.436	0.704	0.465
PNUE	0.232	0.236	0.214	0.227	0.227	0.235	0.233	0.235	0.234	0.125	0.152	0.152	0.211	0.223	0.151	0.186	–	2.592	2.039	2.623	2.056
Chl a	0.234	0.230	0.222	0.233	0.228	0.232	0.232	0.236	0.232	0.216	0.223	0.217	0.235	0.229	0.224	0.233	0.201	–	4.317	20.489	5.452
Chl b	0.233	0.231	0.216	0.231	0.228	0.235	0.235	0.233	0.219	0.220	0.226	0.218	0.233	0.226	0.225	0.234	0.212	0.165	–	4.939	5.593
Chl a+b	0.233	0.228	0.215	0.232	0.225	0.229	0.230	0.235	0.227	0.213	0.220	0.217	0.234	0.229	0.221	0.233	0.200	0.048	0.154	–	5.120
Car	0.235	0.224	0.227	0.235	0.231	0.236	0.235	0.236	0.230	0.223	0.228	0.215	0.236	0.222	0.229	0.234	0.212	0.145	0.142	0.150	–

The data in the upper right corner indicate t-values and the data in the lower left corner indicate standard error.



**Table S9.** The r values and p values of Pearson's correlation analysis of leaf traits of *D. odorifera* in mixed culture.

Leaf traits	LA	LT	LV	LFM	LDM	LDMC	SLA	LTD	LMF	Pn	gs	Tr	Ci	WUE	CE	LNC	PNUE	Chl a	Chl b	Chl a+b	Car
LA	–	0.129	0.856	0.944	0.916	–0.053	–0.129	0.207	0.184	0.031	–0.232	0.032	0.224	–0.061	–0.017	–0.061	0.028	0.039	–0.111	0.172	0.099
LT	0.588	–	0.589	0.312	0.247	–0.019	–0.512	–0.525	–0.027	0.126	0.027	–0.165	–0.188	0.250	0.136	–0.164	0.317	–0.054	–0.032	–0.052	–0.056
LV	0.000	0.006	–	0.900	0.831	–0.077	–0.296	–0.196	0.204	0.164	–0.169	–0.015	0.114	0.091	0.122	–0.126	0.203	0.036	–0.091	0.148	0.092
LFM	0.000	0.181	0.000	–	0.928	–0.166	–0.269	0.194	0.202	0.157	–0.218	0.003	0.069	0.058	0.121	–0.176	0.160	–0.043	–0.168	0.079	0.065
LDM	0.000	0.294	0.000	0.000	–	0.198	–0.488	0.334	0.157	–0.049	–0.222	0.058	0.152	–0.105	–0.079	–0.207	–0.039	0.034	–0.080	0.173	0.137
LDMC	0.825	0.936	0.746	0.485	0.402	–	–0.627	0.189	–0.098	–0.518	0.019	0.161	0.206	–0.420	–0.498	–0.118	–0.525	0.196	0.255	0.243	0.158
SLA	0.588	0.021	0.205	0.251	0.029	0.003	–	–0.195	–0.031	0.223	0.092	0.028	0.129	0.079	0.183	0.363	0.128	0.092	–0.017	0.036	0.021
LTD	0.381	0.018	0.407	0.412	0.151	0.424	0.411	–	–0.274	–0.270	–0.025	0.125	–0.027	–0.263	–0.250	–0.155	–0.301	–0.007	0.006	0.024	0.106
LMF	0.437	0.910	0.388	0.393	0.510	0.681	0.897	0.242	–	0.077	–0.326	–0.160	0.131	0.041	0.057	–0.054	0.012	–0.357	–0.499	–0.293	–0.328
Pn	0.896	0.596	0.489	0.507	0.839	0.019	0.345	0.250	0.746	–	–0.235	–0.316	–0.422	0.807	0.990	–0.062	0.847	0.190	–0.020	0.117	0.048
gs	0.325	0.911	0.476	0.356	0.346	0.937	0.699	0.918	0.160	0.320	–	0.689	–0.025	–0.413	–0.223	0.429	–0.331	0.185	0.365	0.206	0.315
Tr	0.894	0.486	0.950	0.990	0.807	0.498	0.908	0.599	0.501	0.175	0.001	–	0.195	–0.766	–0.337	0.426	–0.641	0.316	0.489	0.280	0.391
Ci	0.342	0.427	0.631	0.773	0.522	0.384	0.587	0.911	0.582	0.064	0.916	0.409	–	–0.460	–0.533	–0.016	–0.386	–0.230	–0.158	–0.205	–0.198
WUE	0.798	0.289	0.703	0.809	0.659	0.065	0.741	0.263	0.865	0.000	0.070	0.000	0.041	–	0.828	–0.261	0.942	–0.065	–0.247	–0.069	–0.163
CE	0.944	0.567	0.610	0.613	0.740	0.025	0.439	0.288	0.813	0.000	0.344	0.146	0.015	0.000	–	–0.082	0.840	0.184	–0.014	0.118	0.047
LNC	0.798	0.490	0.597	0.457	0.381	0.622	0.116	0.515	0.823	0.794	0.059	0.061	0.945	0.266	0.732	–	–0.088	0.546	0.495	0.400	0.408
PNUE	0.905	0.173	0.391	0.500	0.870	0.017	0.591	0.197	0.961	0.000	0.155	0.002	0.093	0.000	0.000	0.711	–	0.057	–0.135	0.040	–0.020
Chl a	0.870	0.823	0.881	0.856	0.887	0.406	0.698	0.975	0.122	0.422	0.436	0.175	0.330	0.787	0.437	0.013	0.813	–	0.781	0.868	0.769
Chl b	0.641	0.894	0.703	0.478	0.737	0.278	0.945	0.981	0.025	0.934	0.114	0.029	0.505	0.294	0.954	0.027	0.569	0.000	–	0.653	0.603
Chl a+b	0.468	0.827	0.534	0.740	0.466	0.302	0.879	0.920	0.210	0.624	0.384	0.231	0.387	0.774	0.621	0.080	0.866	0.000	0.002	–	0.917
Car	0.678	0.815	0.700	0.786	0.565	0.505	0.931	0.658	0.158	0.840	0.175	0.089	0.403	0.492	0.845	0.074	0.932	0.000	0.005	0.000	–

The data in the upper right corner indicate r-values and the data in the lower left corner indicate p-values.

**Table S10.** The t values and standard error of Pearson's correlation analysis of leaf traits of *D. odorifera* in mixed culture.

Leaf traits	LA	LT	LV	LFM	LDM	LDMC	SLA	LTD	LMF	Pn	gs	Tr	Ci	WUE	CE	LNC	PNUE	Chl a	Chl b	Chl a+b	Car
LA	–	0.551	7.013	12.116	9.673	–0.225	–0.552	0.898	0.795	0.132	–1.013	0.136	0.976	–0.260	–0.072	–0.260	0.121	0.166	–0.474	0.742	0.422
LT	0.234	–	3.089	1.392	1.082	–0.081	–2.528	–2.616	–0.115	0.540	0.114	–0.711	–0.812	1.093	0.583	–0.704	1.418	–0.227	–0.135	–0.221	–0.237
LV	0.122	0.191	–	8.771	6.347	–0.328	–1.314	–0.850	0.884	0.707	–0.728	–0.063	0.488	0.388	0.520	–0.538	0.879	0.152	–0.388	0.634	0.392
LFM	0.078	0.224	0.103	–	10.589	–0.713	–1.186	0.839	0.874	0.677	–0.946	0.013	0.293	0.245	0.515	–0.759	0.688	–0.184	–0.725	0.338	0.276
LDM	0.095	0.228	0.131	0.088	–	0.859	–2.373	1.501	0.673	–0.206	–0.967	0.247	0.653	–0.448	–0.337	–0.897	–0.166	0.145	–0.342	0.744	0.586
LDMC	0.235	0.236	0.235	0.232	0.231	–	–3.410	0.819	–0.418	–2.570	0.080	0.691	0.893	–1.964	–2.439	–0.502	–2.617	0.850	1.118	1.063	0.680
SLA	0.234	0.202	0.225	0.227	0.206	0.184	–	–0.841	–0.131	0.970	0.393	0.118	0.553	0.336	0.792	1.652	0.547	0.394	–0.070	0.154	0.088
LTD	0.231	0.201	0.231	0.231	0.222	0.231	0.231	–	–1.209	–1.189	–0.104	0.535	–0.114	–1.156	–1.095	–0.664	–1.341	–0.031	0.024	0.102	0.450
LMF	0.232	0.236	0.231	0.231	0.233	0.235	0.236	0.227	–	0.329	–1.464	–0.687	0.561	0.173	0.241	–0.228	0.050	–1.621	–2.445	–1.299	–1.472
Pn	0.236	0.234	0.232	0.233	0.235	0.202	0.230	0.227	0.235	–	–1.024	–1.414	–1.974	5.795	30.307	–0.265	6.763	0.822	–0.084	0.499	0.205
gs	0.229	0.236	0.232	0.230	0.230	0.236	0.235	0.236	0.223	0.229	–	4.031	–0.107	–1.926	–0.972	2.016	–1.486	0.797	1.661	0.893	1.410
Tr	0.236	0.232	0.236	0.236	0.235	0.233	0.236	0.234	0.233	0.224	0.171	–	0.845	–5.053	–1.518	1.997	–3.540	1.411	2.380	1.239	1.800
Ci	0.230	0.231	0.234	0.235	0.233	0.231	0.234	0.236	0.234	0.214	0.236	0.231	–	–2.199	–2.676	–0.069	–1.774	–1.001	–0.681	–0.887	–0.856
WUE	0.235	0.228	0.235	0.235	0.234	0.214	0.235	0.227	0.236	0.139	0.215	0.152	0.209	–	6.263	–1.149	11.912	–0.274	–1.081	–0.292	–0.702
CE	0.236	0.234	0.234	0.234	0.235	0.204	0.232	0.228	0.235	0.033	0.230	0.222	0.199	0.132	–	–0.348	6.562	0.796	–0.058	0.503	0.199
LNC	0.235	0.233	0.234	0.232	0.231	0.234	0.220	0.233	0.235	0.235	0.213	0.213	0.236	0.228	0.235	–	–0.376	2.767	2.415	1.853	1.898
PNUE	0.236	0.224	0.231	0.233	0.236	0.201	0.234	0.225	0.236	0.125	0.222	0.181	0.217	0.079	0.128	0.235	–	0.240	–0.580	0.171	–0.086
Chl a	0.236	0.235	0.236	0.235	0.236	0.231	0.235	0.236	0.220	0.231	0.232	0.224	0.229	0.235	0.232	0.197	0.235	–	5.309	7.432	5.110
Chl b	0.234	0.236	0.235	0.232	0.235	0.228	0.236	0.236	0.204	0.236	0.219	0.206	0.233	0.228	0.236	0.205	0.234	0.147	–	3.659	3.206
Chl a+b	0.232	0.235	0.233	0.235	0.232	0.229	0.236	0.236	0.225	0.234	0.231	0.226	0.231	0.235	0.234	0.216	0.236	0.117	0.178	–	9.752
Car	0.235	0.235	0.235	0.235	0.233	0.233	0.236	0.234	0.223	0.235	0.224	0.217	0.231	0.233	0.235	0.215	0.236	0.151	0.188	0.094	–

The data in the upper right corner indicate t-values and the data in the lower left corner indicate standard error.