

SUPPLEMENTARY DATA

TABLE S1. Summary of sample size per treatment

Population	Light	Density	Replicates
High Rainfall	High	Low	5
High Rainfall	High	Medium	12
High Rainfall	High	High	6
High Rainfall	Low	Low	11
High Rainfall	Low	Medium	14
High Rainfall	Low	High	13
Medium Rainfall	High	Low	9
Medium Rainfall	High	Medium	8
Medium Rainfall	High	High	7
Medium Rainfall	Low	Low	9
Medium Rainfall	Low	Medium	10
Medium Rainfall	Low	High	11
Low Rainfall	High	Low	10
Low Rainfall	High	Medium	15
Low Rainfall	High	High	13
Low Rainfall	Low	Low	12
Low Rainfall	Low	Medium	6
Low Rainfall	Low	High	10

TABLE S2. Levene's test of equality of error variances

	<i>F</i> -value	d.f.1	d.f.2	<i>P</i> -value
HtoD	2.391	17	157	0.003
Internode	1.096	17	157	0.362
StMR	2.156	17	157	0.007
RMR	1.302	17	157	0.197
LMR	0.881	17	157	0.597
LAR	0.982	17	157	0.481
NAR	1.019	17	157	0.441
SLA	0.935	17	157	0.535

TABLE S3. Full ANOVA table for number of nodes with a compound leaf (i.e. heteroblastic development)

Source	SS	d.f.	MSS	F-value	P-value
Corrected model	72.894	17	4.288	8.550	2.42×10^{-15}
Intercept	4.891	1	4.891	9.753	0.0021
Population	43.598	2	21.799	43.466	7.43×10^{-16}
Light	17.412	1	17.412	34.719	2.12×10^{-8}
Density	8.686	2	4.343	8.660	0.0003
Population \times Light	0.549	2	0.274	0.547	0.5797
Population \times Density	3.781	4	0.945	1.885	0.1156
Light \times Density	1.871	2	0.936	1.865	0.1581
Population \times Light \times Density	0.968	4	0.242	0.483	0.7484
Error	81.748	163	0.502		
Total	165.839	181			
Corrected Total	154.641	180			

TABLE S4. Full ANOVA table for shade-avoidance traits

Source	Trait	SS	d.f.	MSS	F-value	P-value
Corrected Model	HtoD	108.083	17	6.358	20.092	4.26×10^{-31}
	Internode	100.598	17	5.918	15.438	1.70×10^{-25}
	StMR	68.508	17	4.030	7.032	1.81×10^{-12}
	RMR	26.933	17	1.584	1.814	0.0305
	LMR	27.253	17	1.603	1.967	0.0163
	LAR	55.612	17	3.271	4.828	3.15×10^{-8}
	NAR	38.456	17	2.262	2.914	0.0002
	SLA	67.714	17	3.983	6.232	5.72×10^{-11}
Intercept	HtoD	0.172	1	0.172	0.545	0.4615
	Internode	0.006	1	0.006	0.017	0.8977
	StMR	0.003	1	0.003	0.005	0.9455
	RMR	0.100	1	0.100	0.114	0.7361
	LMR	0.097	1	0.097	0.119	0.7302
	LAR	0.126	1	0.126	0.185	0.6675
	NAR	0.197	1	0.197	0.253	0.6154
	SLA	0.652	1	0.652	1.020	0.3140
Population	HtoD	28.024	2	14.012	44.280	5.63×10^{-16}
	Internode	33.834	2	16.917	44.134	6.18×10^{-16}
	StMR	19.282	2	9.641	16.824	2.40×10^{-7}
	RMR	4.906	2	2.453	2.808	0.0633
	LMR	2.512	2	1.256	1.541	0.2173
	LAR	8.228	2	4.114	6.072	0.0029
	NAR	1.525	2	0.763	0.982	0.3767
	SLA	6.639	2	3.320	5.194	0.0065
Light	HtoD	52.708	1	52.708	166.570	1.95×10^{-26}
	Internode	38.625	1	38.625	100.767	1.26×10^{-18}
	StMR	14.603	1	14.603	25.482	1.22×10^{-6}

	RMR	10.930	1	10.930	12.512	0.0005
	LMR	0.069	1	0.069	0.084	0.7720
	LAR	31.050	1	31.050	45.830	2.43×10^{-10}
	NAR	18.439	1	18.439	23.751	2.66×10^{-6}
	SLA	53.127	1	53.127	83.117	3.50×10^{-16}
Density	HtoD	0.967	2	0.484	1.528	0.2201
	Internode	0.008	2	0.004	0.010	0.9903
	StMR	17.492	2	8.746	15.262	8.77×10^{-7}
	RMR	0.578	2	0.289	0.331	0.7187
	LMR	13.251	2	6.625	8.131	0.0004
	LAR	8.932	2	4.466	6.592	0.0018
	NAR	8.127	2	4.064	5.234	0.0063
	SLA	1.666	2	0.833	1.303	0.2747
Population \times Light	HtoD	0.042	2	0.021	0.066	0.9363
	Internode	0.076	2	0.038	0.099	0.9057
	StMR	2.317	2	1.159	2.022	0.1359
	RMR	0.519	2	0.260	0.297	0.7432
	LMR	2.110	2	1.055	1.295	0.2769
	LAR	6.040	2	3.020	4.457	0.0131
	NAR	3.670	2	1.835	2.364	0.0974
	SLA	4.838	2	2.419	3.784	0.0248
Population \times Density	HtoD	2.593	4	0.648	2.049	0.0901
	Internode	4.075	4	1.019	2.658	0.0349
	StMR	1.134	4	0.283	0.494	0.7398
	RMR	2.860	4	0.715	0.819	0.5151
	LMR	3.617	4	0.904	1.110	0.3540
	LAR	0.298	4	0.074	0.110	0.9789
	NAR	2.553	4	0.638	0.822	0.5128
	SLA	1.532	4	0.383	0.599	0.6637
Light \times Density	HtoD	0.731	2	0.365	1.154	0.3179
	Internode	1.476	2	0.738	1.926	0.1492
	StMR	1.674	2	0.837	1.461	0.2352
	RMR	1.547	2	0.774	0.886	0.4145
	LMR	1.816	2	0.908	1.114	0.3308
	LAR	1.008	2	0.504	0.744	0.4770
	NAR	1.892	2	0.946	1.219	0.2984
	SLA	0.082	2	0.041	0.064	0.9377
Population \times Light \times Density	HtoD	2.491	4	0.623	1.968	0.1020
	Internode	0.822	4	0.205	0.536	0.7095
	StMR	0.511	4	0.128	0.223	0.9253
	RMR	3.116	4	0.779	0.892	0.4704
	LMR	4.113	4	1.028	1.262	0.2874
	LAR	3.516	4	0.879	1.297	0.2735
	NAR	4.324	4	1.081	1.393	0.2390
	SLA	1.792	4	0.448	0.701	0.5925
Error	HtoD	49.680	157	0.316		
	Internode	60.179	157	0.383		
	StMR	89.971	157	0.573		
	RMR	137.143	157	0.874		
	LMR	127.932	157	0.815		
	LAR	106.369	157	0.678		

Total	NAR	121.883	157	0.776
	SLA	100.351	157	0.639
	HtoD	157.919	175	
	Internode	160.846	175	
	StMR	158.480	175	
	RMR	164.205	175	
	LMR	155.330	175	
	LAR	161.992	175	
Corrected Total	NAR	160.394	175	
	SLA	168.101	175	
	HtoD	157.763	174	
	Internode	160.777	174	
	StMR	158.479	174	
	RMR	164.076	174	
	LMR	155.185	174	
	LAR	161.981	174	
	NAR	160.339	174	
	SLA	168.066	174	

TABLE S5. Full ANOVA tables for (a) relative growth rate, (b) relative height growth; and (c) total plant dry weight at time of harvest

(a) Relative growth rate

Source	SS	d.f.	MSS	<i>F</i> -value	<i>P</i> -value
Corrected Model	28.118	17	1.654	1.872	0.0238
Intercept	0.269	1	0.269	0.305	0.5816
Population	6.456	2	3.228	3.654	0.0280
Light	3.352	1	3.352	3.793	0.0532
Density	12.683	2	6.342	7.177	0.0010
Population × Light	1.264	2	0.632	0.715	0.4906
Population × Density	4.674	4	1.169	1.323	0.2638
Light × Density	0.146	2	0.073	0.082	0.9210
Population × Light × Density	2.567	4	0.642	0.726	0.5752
Error	144.021	163	0.884		
Total	172.139	181			
Corrected Total	172.139	180			

(b) Relative height growth

Source	SS	d.f.	MSS	<i>F</i> -value	<i>P</i> -value
Corrected Model	65.550	17	3.856	5.892	2.07×10^{-10}
Intercept	0.018	1	0.018	0.028	0.8685
Population	22.399	2	11.200	17.114	1.79×10^{-7}
Light	16.932	1	16.932	25.875	9.93×10^{-7}
Density	6.367	2	3.184	4.865	0.0089
Population × Light	0.154	2	0.077	0.118	0.8888
Population × Density	5.201	4	1.300	1.987	0.0989
Light × Density	3.165	2	1.583	2.418	0.0922
Population × Light × Density	1.929	4	0.482	0.737	0.5679

Error	106.666	163	0.654
Total	172.216	181	
Corrected Total	172.216	180	

(c) Total plant dry weight at time of harvest

Source	SS	d.f.	MSS	<i>F</i> -value	<i>P</i> -value
Corrected Model	42.254	17	2.486	3.117	0.0001
Intercept	0.049	1	0.049	0.061	0.8047
Population	4.366	2	2.183	2.738	0.0677
Light	1.674	1	1.674	2.100	0.1492
Density	24.835	2	12.417	15.574	6.46×10^{-7}
Population \times Light	1.631	2	0.816	1.023	0.3618
Population \times Density	2.648	4	0.662	0.830	0.5076
Light \times Density	1.675	2	0.837	1.050	0.3522
Population \times Light \times Density	4.759	4	1.190	1.492	0.2069
Error	129.959	163	0.797		
Total	172.213	181			
Corrected Total	172.213	180			