

**Supplementary Table 5** – Correlations across all three species of *Yucca*, on both raw data (individual plants) and genotypic means.

Correlations on raw data							
x	y	cor	R2	df	t.value	p.value	padj
AUC_D	AUC_W	0.57374	0.329178	99	6.969946	3.57E-10	4.64E-09
AUC_D_night	AUC_W	0.312798	0.097842	98	3.260134	0.001532	0.004979
AUC_D_night	AUC_W_night	0.76847	0.590546	98	11.88877	1.03E-20	2.69E-19
AUC_D_night	d1delta	0.38312	0.146781	75	3.591994	0.000584	0.002168
AUC_D_night	d7delta	0.53239	0.283439	75	5.446711	6.24E-07	4.64E-06
AUC_D_night	maxTA_d1	0.447479	0.200237	77	4.390737	3.55E-05	0.000205
AUC_D_night	meancell	0.604357	0.365248	34	4.423146	9.48E-05	0.000411
AUC_D_night	thickum	0.622444	0.387437	34	4.637292	5.05E-05	0.000262
AUC_W_night	AUC_D	0.249919	0.06246	99	2.568161	0.011718	0.027697
AUC_W_night	d1delta	0.299694	0.089817	77	2.75651	0.007291	0.018956
AUC_W_night	d7delta	0.449911	0.20242	77	4.420635	3.18E-05	0.000205
AUC_W_night	maxTA_d1	0.384125	0.147552	79	3.697877	0.0004	0.001599
AUC_W_night	meancell	0.712575	0.507763	47	6.962932	9.30E-09	8.06E-08
AUC_W_night	thickum	0.744887	0.554857	47	7.654015	8.40E-10	8.74E-09
d1delta	d7delta	0.299087	0.089453	93	3.022645	0.003237	0.009352
d7delta	AUC_D	0.371735	0.138187	74	3.444633	0.000945	0.003277
IAS	AUC_D	-0.44819	0.20087	33	-2.88009	0.006932	0.018956
IAS	AUC_D_night	-0.43409	0.188435	33	-2.76807	0.009176	0.02272
IAS	AUC_W	-0.53486	0.286075	46	-4.29332	8.99E-05	0.000411
IAS	AUC_W_night	-0.43782	0.191684	46	-3.3028	0.001858	0.005683
maxTA_d1	d7delta	0.617682	0.381531	94	7.615005	2.03E-11	3.53E-10
meancell	thickum	0.889419	0.791066	67	15.92717	1.81E-24	9.39E-23
meanSD	AUC_W_night	-0.44168	0.195084	26	-2.51028	0.018619	0.042095
AUC_D	maxTA_d1	0.245118	0.060083	76	2.204131	0.030542	0.066175
IAS	thickum	-0.24707	0.061042	65	-2.05564	0.043839	0.091184
meancell	AUC_W	-0.26119	0.068222	47	-1.85505	0.069867	0.139734
meancell	meanSD	-0.3517	0.123696	22	-1.76222	0.091922	0.177035
thickum	meanSD	-0.32511	0.105699	22	-1.61252	0.121103	0.224905
IAS	meancell	-0.17389	0.030239	65	-1.42365	0.159329	0.251064
IAS	meanSD	0.297944	0.088771	22	1.463972	0.157345	0.251064
IAS	d1delta	-0.28296	0.080067	26	-1.50431	0.144554	0.251064
thickum	AUC_W	-0.20525	0.042126	47	-1.4377	0.157143	0.251064
thickum	maxTA_d1	0.278607	0.077622	26	1.479192	0.151104	0.251064
IAS	maxTA_d1	-0.26259	0.068952	26	-1.38763	0.177028	0.270749
meanSD	d1delta	-0.29026	0.08425	18	-1.28686	0.214446	0.318605
thickum	d1delta	0.216917	0.047053	26	1.133042	0.267537	0.386443
IAS	d7delta	-0.21713	0.047147	25	-1.11221	0.27663	0.388777
AUC_W	d7delta	0.117406	0.013784	77	1.037405	0.302794	0.41435

<b>meancell</b>	d7delta	-0.17515	0.030676	25	-0.88948	0.382225	0.509634
<b>meanSD</b>	AUC_D_night	-0.18131	0.032873	16	-0.73746	0.471519	0.612974
<b>meanSD</b>	AUC_D	0.158881	0.025243	17	0.663509	0.515902	0.638736
<b>AUC_W</b>	d1delta	-0.07481	0.005597	77	-0.65832	0.512299	0.638736
<b>meancell</b>	d1delta	0.110505	0.012211	26	0.566938	0.575618	0.696097
<b>AUC_W</b>	meanSD	-0.10572	0.011176	26	-0.54209	0.592376	0.70008
<b>thickum</b>	d7delta	0.081677	0.006671	25	0.409752	0.685478	0.763994
<b>meancell</b>	maxTA_d1	-0.07871	0.006196	26	-0.4026	0.690533	0.763994
<b>AUC_D</b>	d1delta	0.050302	0.00253	74	0.433262	0.666085	0.763994
<b>AUC_W</b>	maxTA_d1	0.038753	0.001502	79	0.344701	0.731235	0.792172
<b>meancell</b>	AUC_D	-0.05547	0.003076	34	-0.32392	0.747984	0.793778
<b>meanSD</b>	d7delta	-0.05516	0.003043	18	-0.23439	0.817329	0.850022
<b>thickum</b>	AUC_D	0.02835	0.000804	34	0.165372	0.86963	0.886682
<b>meanSD</b>	maxTA_d1	0.009394	8.82E-05	18	0.039858	0.968645	0.968645

Correlations on genotypic means							
x	y	cor	R2	df	t.value	p.value	padj
<b>AUC_D</b>	AUC_W	0.737386	0.543738	29	5.878774	2.22E-06	1.93E-05
<b>AUC_D</b>	maxTA_d1	0.525983	0.276658	24	3.029738	0.005782	0.017685
<b>AUC_D_night</b>	AUC_W_night	0.819337	0.671313	29	7.696097	1.74E-08	4.52E-07
<b>AUC_D_night</b>	d1delta	0.616404	0.379954	24	3.834945	0.000799	0.003195
<b>AUC_D_night</b>	d7delta	0.722282	0.521692	24	5.116333	3.10E-05	0.000201
<b>AUC_D_night</b>	maxTA_d1	0.638753	0.408005	24	4.067049	0.000445	0.001927
<b>AUC_D_night</b>	meancell	0.712399	0.507512	24	4.97314	4.45E-05	0.000257
<b>AUC_D_night</b>	thickum	0.724402	0.524758	24	5.147876	2.86E-05	0.000201
<b>AUC_W_night</b>	AUC_D	0.414227	0.171584	29	2.45083	0.02052	0.048501
<b>AUC_W_night</b>	d1delta	0.517514	0.26782	24	2.962911	0.006776	0.019576
<b>AUC_W_night</b>	d7delta	0.646963	0.418562	24	4.156554	0.000354	0.001676
<b>AUC_W_night</b>	maxTA_d1	0.579308	0.335598	24	3.481767	0.001927	0.006681
<b>AUC_W_night</b>	meancell	0.822761	0.676936	25	7.237677	1.39E-07	2.40E-06
<b>AUC_W_night</b>	thickum	0.802729	0.644374	25	6.730427	4.71E-07	6.12E-06
<b>d1delta</b>	d7delta	0.517048	0.267338	28	3.196377	0.003436	0.011169
<b>d7delta</b>	AUC_D	0.656099	0.430466	24	4.259071	0.000273	0.001421
<b>IAS</b>	AUC_D	-0.50662	0.25666	24	-2.87866	0.008264	0.022617
<b>IAS</b>	AUC_D_night	-0.48779	0.237938	24	-2.73743	0.011476	0.029837
<b>IAS</b>	AUC_W	-0.59668	0.356028	25	-3.71773	0.001019	0.003785
<b>IAS</b>	AUC_W_night	-0.47222	0.222996	25	-2.67859	0.01288	0.031894
<b>maxTA_d1</b>	d7delta	0.765006	0.585234	28	6.285538	8.52E-07	8.86E-06
<b>meancell</b>	thickum	0.93797	0.879787	35	16.00468	1.13E-17	5.86E-16
<b>AUC_D_night</b>	AUC_W	0.397453	0.157969	29	2.332495	0.026822	0.05914
<b>meanSD</b>	AUC_W_night	-0.44112	0.194583	23	-2.35725	0.027295	0.05914
<b>AUC_D</b>	d1delta	0.408719	0.167051	24	2.193924	0.038162	0.079378
<b>meancell</b>	AUC_W	-0.3267	0.106732	25	-1.72833	0.096264	0.192527

<b>meancell</b>	meanSD	-0.34722	0.120561	20	-1.65583	0.113364	0.21833
<b>IAS</b>	thickum	-0.25099	0.062997	35	-1.53399	0.134023	0.240317
<b>thickum</b>	meanSD	-0.33252	0.110569	20	-1.5768	0.130529	0.240317
<b>IAS</b>	meanSD	0.277702	0.077118	20	1.292767	0.210827	0.332213
<b>IAS</b>	d1delta	-0.32499	0.105619	15	-1.33093	0.203089	0.332213
<b>IAS</b>	maxTA_d1	-0.32274	0.10416	15	-1.32063	0.20642	0.332213
<b>thickum</b>	maxTA_d1	0.320499	0.10272	15	1.310414	0.209767	0.332213
<b>thickum</b>	AUC_W	-0.23454	0.055009	25	-1.20635	0.238974	0.36549
<b>IAS</b>	meancell	-0.17647	0.031141	35	-1.06064	0.296118	0.430315
<b>meanSD</b>	d1delta	-0.29968	0.089807	12	-1.08813	0.29791	0.430315
<b>meancell</b>	d7delta	-0.24936	0.062178	15	-0.99725	0.33446	0.470052
<b>meancell</b>	d1delta	0.238071	0.056678	15	0.949342	0.357493	0.476657
<b>meanSD</b>	AUC_D	0.25024	0.06262	14	0.967081	0.349914	0.476657
<b>thickum</b>	d1delta	0.230808	0.053272	15	0.918722	0.372779	0.484612
<b>IAS</b>	d7delta	-0.20197	0.04079	15	-0.79867	0.436947	0.554176
<b>meanSD</b>	AUC_D_night	-0.20233	0.040936	13	-0.7449	0.469583	0.581388
<b>thickum</b>	d7delta	0.179804	0.032329	15	0.707914	0.489853	0.592381
<b>meanSD</b>	d7delta	-0.19194	0.03684	12	-0.67749	0.510945	0.603844
<b>AUC_W</b>	d7delta	0.122804	0.015081	24	0.606201	0.550073	0.63564
<b>thickum</b>	AUC_D	0.061369	0.003766	24	0.301215	0.765845	0.865738
<b>AUC_W</b>	meanSD	-0.05449	0.00297	23	-0.26173	0.795859	0.880525
<b>meancell</b>	AUC_D	-0.04414	0.001948	24	-0.21643	0.830482	0.881108
<b>meanSD</b>	maxTA_d1	-0.05674	0.00322	12	-0.19688	0.847219	0.881108
<b>AUC_W</b>	maxTA_d1	0.047827	0.002287	24	0.234572	0.816531	0.881108
<b>AUC_W</b>	d1delta	-0.01979	0.000392	24	-0.09699	0.923543	0.941652
<b>meancell</b>	maxTA_d1	-0.0161	0.000259	15	-0.06237	0.951094	0.951094

#### Abbreviations:

AUC_W	Area under the curve, LiCor data well-watered
AUC_D	Area under the curve, LiCor data drought-stressed
AUC_W_night	Area under the curve, LiCor data well-watered, night only
AUC_D_night	Area under the curve, LiCor data drought-stressed, night only
meancell	Mean cell area (um)
thickum	Mean leaf thickness (um)
IAS	Intercellular airspace
d1delta	Leaf acid accumulation, well-watered
d7delta	Leaf acid accumulation, drought-stressed
maxTA_d1	Maximum amount of acid accumulated (well-watered)
meanSD	Mean stomatal density