

Supplemental Data for:

Gerzon, E., I. Biton, Y. Yaniv, H. Zemach, Y. Netzer, A. Schwartz, A. Fait, and G. Ben-Ari. 2015.

Grapevine anatomy as a possible determinant of isohydric or anisohydric behavior.

Am. J. Enol. Vitic. 66:340-347. doi: 10.5344/ajev.2015.14090.

Supplemental Table 1 All physiological measurements carried out during 2011 and 2012 experiments. Values are mean \pm standard errors.

Year of experiment	Cultivar	Rootstock	Irrigation treatment	Day of experiment	Predawn Ψ leaf (MPa)	Midday Ψ leaf (MPa)	Midday Ψ stem (MPa)	Stomatal conductance (mol/m ² s)	Midday leaf temperature (°C)
2011	G	P	25%	0	-0.218 \pm 0.039	-0.988 \pm 0.230	-0.874 \pm 0.120	0.105 \pm 0.023	33.925 \pm 0.983
2011	G	P	25%	6	-0.695 \pm 0.171	-0.823 \pm 0.048	-0.945 \pm 0.061	0.04 \pm 0.007	35 \pm 0.920
2011	G	P	25%	9	-0.75 \pm 0.140	-0.918 \pm 0.104		0.028 \pm 0.005	37.7 \pm 0.662
2011	G	P	25%	13	-0.693 \pm 0.041	-1.058 \pm 0.144	-0.668 \pm 0.058	0.045 \pm 0.004	36.225 \pm 0.327
2011	G	P	25%	16	-0.48 \pm 0.038	-0.733 \pm 0.058	-0.738 \pm 0.085	0.05 \pm 0.007	35.775 \pm 0.545
2011	G	P	25%	20	-0.808 \pm 0.102	-1.123 \pm 0.060	-1.115 \pm 0.107	0.023 \pm 0.007	36.875 \pm 0.733
2011	G	P	25%	27	-0.525 \pm 0.027	-1.305 \pm 0.118	-0.89 \pm 0.072	0.028 \pm 0.007	34.675 \pm 1.293
2011	G	P	25%	34	-0.728 \pm 0.062	-1.26 \pm 0.090	-0.813 \pm 0.073	0.055 \pm 0.002	28.975 \pm 0.810
2011	G	P	25%	48	-0.76 \pm 0.028	-1.1 \pm 0.174	-1.14 \pm 0.117	0.043 \pm 0.015	32.925 \pm 1.107
2011	G	P	25%	55	-0.608 \pm 0.034	-1.297 \pm 0.174	-0.963 \pm 0.110	0.032 \pm 0.006	35.15 \pm 1.894
2011	G	R	25%	0	-0.221 \pm 0.013	-1.055 \pm 0.088	-0.867 \pm 0.070	0.125 \pm 0.039	34.425 \pm 0.777
2011	G	R	25%	6	-0.708 \pm 0.093	-0.78 \pm 0.100	-0.803 \pm 0.064	0.043 \pm 0.002	34.15 \pm 1.050
2011	G	R	25%	9	-0.815 \pm 0.156	-0.83 \pm 0.050		0.048 \pm 0.012	37.75 \pm 0.902
2011	G	R	25%	13	-0.698 \pm 0.062	-1.14 \pm 0.092	-0.738 \pm 0.069	0.04 \pm 0.011	36.625 \pm 0.771
2011	G	R	25%	16	-0.418 \pm 0.036	-1.188 \pm 0.222	-0.635 \pm 0.009	0.055 \pm 0.013	35.1 \pm 1.398
2011	G	R	25%	20	-0.953 \pm 0.091	-1.005 \pm 0.065	-1.3 \pm 0.018	0.013 \pm 0.001	38.225 \pm 0.503
2011	G	R	25%	27	-0.613 \pm 0.063	-1.035 \pm 0.150	-0.8 \pm 0.066	0.033 \pm 0.010	35.575 \pm 0.473
2011	G	R	25%	34	-0.885 \pm 0.047	-1.143 \pm 0.144	-0.923 \pm 0.079	0.053 \pm 0.008	31.75 \pm 0.497
2011	G	R	25%	48	-0.848 \pm 0.062	-1.168 \pm 0.039	-1.333 \pm 0.167	0.035 \pm 0.004	34.125 \pm 0.743
2011	G	R	25%	55	-0.648 \pm 0.032	-1.361 \pm 0.123	-0.934 \pm 0.054	0.044 \pm 0.005	34.85 \pm 0.473
2011	S	P	25%	0	-0.187 \pm 0.018	-1.036 \pm 0.137	-0.99 \pm 0.120	0.11 \pm 0.052	33.6 \pm 0.909
2011	S	P	25%	6	-0.723 \pm 0.095	-1.255 \pm 0.193	-0.895 \pm 0.039	0.055 \pm 0.028	33.45 \pm 0.793
2011	S	P	25%	9	-0.855 \pm 0.089	-1.078 \pm 0.098		0.073 \pm 0.031	36.425 \pm 1.010
2011	S	P	25%	13	-0.743 \pm 0.052	-1.43 \pm 0.224	-0.913 \pm 0.109	0.075 \pm 0.037	34.525 \pm 0.937
2011	S	P	25%	16	-0.55 \pm 0.022	-1.57 \pm 0.072	-0.685 \pm 0.057	0.075 \pm 0.027	33.475 \pm 0.344
2011	S	P	25%	20	-0.77 \pm 0.105	-1.233 \pm 0.042	-1.11 \pm 0.272	0.045 \pm 0.018	35.375 \pm 0.349
2011	S	P	25%	27	-0.75 \pm 0.134	-1.585 \pm 0.167	-0.943 \pm 0.031	0.063 \pm 0.006	33.55 \pm 0.405
2011	S	P	25%	34	-0.823 \pm 0.027	-1.505 \pm 0.124	-1.02 \pm 0.046	0.08 \pm 0.011	31.075 \pm 1.032
2011	S	P	25%	48	-1.175 \pm 0.253	-1.388 \pm 0.042	-1.398 \pm 0.131	0.075 \pm 0.022	33.425 \pm 0.845
2011	S	P	25%	55	-0.928 \pm 0.207	-1.52 \pm 0.179	-1.028 \pm 0.130	0.045 \pm 0.010	32.425 \pm 0.546
2011	S	R	25%	0	-0.176 \pm 0.011	-1.144 \pm 0.135	-1.083 \pm 0.167	0.095 \pm 0.015	34.6 \pm 1.719
2011	S	R	25%	6	-0.735 \pm 0.039	-1.243 \pm 0.154	-0.713 \pm 0.065	0.05 \pm 0.014	35 \pm 0.667
2011	S	R	25%	9	-0.76 \pm 0.040	-1.023 \pm 0.192		0.045 \pm 0.014	37.15 \pm 0.651
2011	S	R	25%	13	-0.775 \pm 0.059	-1.33 \pm 0.234	-0.73 \pm 0.051	0.08 \pm 0.021	34.975 \pm 1.186
2011	S	R	25%	16	-0.485 \pm 0.032	-1.253 \pm 0.175	-0.795 \pm 0.168	0.073 \pm 0.016	34.075 \pm 0.779
2011	S	R	25%	20	-0.973 \pm 0.107	-1.11 \pm 0.073	-1.268 \pm 0.084	0.038 \pm 0.009	36.85 \pm 0.913
2011	S	R	25%	27	-0.655 \pm 0.080	-1.408 \pm 0.182	-0.865 \pm 0.068	0.05 \pm 0.008	34.7 \pm 1.438
2011	S	R	25%	34	-0.878 \pm 0.079	-1.473 \pm 0.287	-0.863 \pm 0.045	0.053 \pm 0.009	29.75 \pm 0.366
2011	S	R	25%	48	-0.775 \pm 0.087	-1.505 \pm 0.155	-1.415 \pm 0.074	0.058 \pm 0.013	32.625 \pm 0.965
2011	S	R	25%	55	-0.764 \pm 0.026	-1.296 \pm 0.191	-1.006 \pm 0.096	0.065 \pm 0.028	33.175 \pm 0.924
2011	G	P	50%	0	-0.22 \pm 0.04	-1.33 \pm 0.12	-0.96 \pm 0.1	0.14 \pm 0.03	33.05 \pm 1.1
2011	G	P	50%	6	-0.54 \pm 0.03	-1.33 \pm 0.06	-0.78 \pm 0.06	0.11 \pm 0.02	34.08 \pm 1.28
2011	G	P	50%	9	-0.55 \pm 0.04	-1.47 \pm 0.14		0.11 \pm 0.01	33.7 \pm 0.52
2011	G	P	50%	13	-0.49 \pm 0.06	-0.97 \pm 0.13	-0.67 \pm 0.05	0.07 \pm 0.01	32.93 \pm 0.93
2011	G	P	50%	16	-0.41 \pm 0.03	-1.07 \pm 0.14	-0.65 \pm 0.08	0.05 \pm 0.01	33.35 \pm 0.86
2011	G	P	50%	20	-0.67 \pm 0.06	-0.96 \pm 0.1	-0.75 \pm 0.09	0.08 \pm 0.01	32.4 \pm 0.15
2011	G	P	50%	27		-0.97 \pm 0.24	-0.65 \pm 0.08	0.04 \pm	31.93 \pm 0.7
2011	G	P	50%	34	-0.62 \pm 0.11	-1.12 \pm 0.19	-0.73 \pm 0.06	0.04 \pm 0.01	30.23 \pm 1.1
2011	G	P	50%	48	-0.95 \pm 0.04	-0.93 \pm 0.07	-1.01 \pm 0.08	0.05 \pm 0.02	34.25 \pm 0.67
2011	G	P	50%	55	-0.66 \pm 0.03	-1.32 \pm 0.14	-0.84 \pm 0.05	0.12 \pm 0.04	33.53 \pm 0.77
2011	G	R	50%	0	-0.18 \pm 0.03	-1.25 \pm 0.03	-1.09 \pm 0.09	0.07 \pm 0.03	33.6 \pm 0.86

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Supplemental Table 1 All physiological measurements carried out during 2011 and 2012 experiments. Values are mean \pm standard errors.

Year of experiment	Cultivar	Rootstock	Irrigation treatment	Day of experiment	Predawn Ψ_{leaf} (MPa)	Midday Ψ_{leaf} (MPa)	Midday Ψ_{stem} (MPa)	Stomatal conductance (mol/m ² s)	Midday leaf temperature (°C)
2011	G	R	50%	6	-0.45 \pm 0.08	-0.88 \pm 0.09	-0.85 \pm 0.08	0.06 \pm 0.02	34.2 \pm 0.47
2011	G	R	50%	9	-0.42 \pm 0.09	-0.83 \pm 0.1		0.06 \pm 0.03	37.33 \pm 0.55
2011	G	R	50%	13	-0.42 \pm 0.1	-1.06 \pm 0.08	-0.62 \pm 0.01	0.06 \pm 0.02	35.78 \pm 0.56
2011	G	R	50%	16	-0.41 \pm 0.05	-0.96 \pm 0.11	-0.54 \pm 0.05	0.03 \pm 0.01	34.93 \pm 0.81
2011	G	R	50%	20	-0.61 \pm 0.06	-1.05 \pm 0.13	-0.69 \pm 0.08	0.09 \pm 0.01	35.38 \pm 0.63
2011	G	R	50%	27		-0.87 \pm 0.08	-0.57 \pm 0.09	0.08 \pm 0.02	33.45 \pm 0.49
2011	G	R	50%	34	-0.46 \pm 0.08	-1.29 \pm 0.18	-0.8 \pm 0.07	0.05 \pm	29.75 \pm 0.46
2011	G	R	50%	48	-0.7 \pm 0.1	-1.13 \pm 0.12	-0.83 \pm 0.08	0.05 \pm 0.01	32.7 \pm 0.69
2011	G	R	50%	55	-0.58 \pm 0.08	-1.23 \pm 0.14	-0.77 \pm 0.09	0.13 \pm 0.02	29.03 \pm 2.36
2011	S	P	50%	0	-0.22 \pm 0.03	-1.13 \pm 0.1	-0.86 \pm 0.1	0.15 \pm 0.03	33.85 \pm 0.65
2011	S	P	50%	6	-0.5 \pm 0.05	-1.55 \pm 0.05	-0.92 \pm 0.15	0.13 \pm 0.02	34.38 \pm 1.07
2011	S	P	50%	9	-0.46 \pm 0.05	-1.48 \pm 0.05		0.15 \pm 0.02	34.65 \pm 1.03
2011	S	P	50%	13	-0.54 \pm 0.01	-1.25 \pm 0.13	-0.79 \pm 0.05	0.14 \pm 0.03	34.53 \pm 1.2
2011	S	P	50%	16	-0.52 \pm 0.05	-1.14 \pm 0.13	-0.69 \pm 0.09	0.07 \pm 0.01	33.7 \pm 1.07
2011	S	P	50%	20	-0.68 \pm 0.06	-1.65 \pm 0.06	-0.86 \pm 0.17	0.09 \pm 0.02	33.78 \pm 0.75
2011	S	P	50%	27		-1.49 \pm 0.02	-0.92 \pm 0.1	0.09 \pm 0.03	33.1 \pm 0.73
2011	S	P	50%	34	-0.56 \pm 0.02	-1.4 \pm 0.11	-0.81 \pm 0.07	0.08 \pm 0.03	27.75 \pm 0.8
2011	S	P	50%	48	-0.7 \pm 0.1	-1.34 \pm 0.04	-1.12 \pm 0.08	0.1 \pm 0.03	32.13 \pm 0.38
2011	S	P	50%	55	-0.57 \pm 0.01	-1.56 \pm 0.08	-0.98 \pm 0.03	0.15 \pm 0.03	34.15 \pm 0.34
2011	S	R	50%	0	-0.17 \pm 0.04	-1.16 \pm 0.14	-1.3 \pm 0.05	0.14 \pm 0.02	33.1 \pm 1.22
2011	S	R	50%	6	-0.37 \pm 0.04	-0.92 \pm 0.14	-1.06 \pm 0.03	0.13 \pm 0.02	34.5 \pm 1.4
2011	S	R	50%	9	-0.38 \pm 0.07	-1.14 \pm 0.14		0.11 \pm 0.02	34.85 \pm 0.41
2011	S	R	50%	13	-0.49 \pm 0.08	-1.22 \pm 0.1	-0.67 \pm 0.03	0.14 \pm 0.01	34.4 \pm 0.3
2011	S	R	50%	16	-0.44 \pm 0.03	-1.46 \pm 0.26	-0.67 \pm 0.05	0.11 \pm 0.02	32.58 \pm 0.74
2011	S	R	50%	20	-0.61 \pm 0.07	-1.42 \pm 0.13	-0.86 \pm 0.07	0.13 \pm 0.01	33.63 \pm 0.6
2011	S	R	50%	27		-1.18 \pm 0.17	-0.68 \pm 0.04	0.12 \pm 0.03	33.43 \pm 0.46
2011	S	R	50%	34	-0.63 \pm 0.03	-1.42 \pm 0.18	-0.79 \pm 0.06	0.13 \pm 0.02	30.68 \pm 0.54
2011	S	R	50%	48	-0.77 \pm 0.09	-1.14 \pm 0.1	-0.94 \pm 0.08	0.14 \pm 0.04	32.25 \pm 1.32
2011	S	R	50%	55	-0.68 \pm 0.08	-1.3 \pm 0.17	-0.93 \pm 0.06	0.08 \pm 0.02	32.18 \pm 1.67
2011	G	P	75%	0	-0.23 \pm 0.05	-1.22 \pm 0.11	-1.03 \pm 0.18	0.07 \pm 0.01	33.78 \pm 0.91
2011	G	P	75%	6	-0.35 \pm 0.04	-1.26 \pm 0.09	-0.91 \pm 0.07	0.06 \pm 0.02	34.6 \pm 0.55
2011	G	P	75%	9	-0.34 \pm 0.03	-1.01 \pm 0.11		0.07 \pm 0.01	35.03 \pm 1.05
2011	G	P	75%	13	-0.35 \pm 0.02	-1.14 \pm 0.23	-0.69 \pm 0.03	0.06 \pm 0.01	37.28 \pm 0.75
2011	G	P	75%	16	-0.37 \pm 0.04	-1.12 \pm 0.16	-0.69 \pm 0.04	0.07 \pm 0.01	35.25 \pm 0.91
2011	G	P	75%	20	-0.51 \pm 0.06	-1.06 \pm 0.17	-0.77 \pm 0.07	0.08 \pm 0.03	35.38 \pm 0.92
2011	G	P	75%	27	-0.34 \pm 0.02	-1.04 \pm 0.09	-0.63 \pm 0.06	0.09 \pm 0.02	32.5 \pm 0.72
2011	G	P	75%	34	-0.45 \pm 0.06	-1.27 \pm 0.17	-0.6 \pm 0.01	0.07 \pm 0.01	29.25 \pm 1.14
2011	G	P	75%	48	-0.58 \pm 0.06	-0.97 \pm 0.04	-0.73 \pm 0.03	0.09 \pm 0.01	32.43 \pm 0.57
2011	G	P	75%	55	-0.46 \pm 0.04	-1.18 \pm 0.06	-0.75 \pm 0.03	0.14 \pm 0.05	33.88 \pm 1.06
2011	G	R	75%	0	-0.19 \pm 0.04	-0.9 \pm 0.13	-0.84 \pm 0.06	0.1 \pm 0.01	32.25 \pm 0.86
2011	G	R	75%	6	-0.29 \pm 0.04	-1.06 \pm 0.25	-0.75 \pm 0.01	0.08 \pm 0.01	35.25 \pm 0.42
2011	G	R	75%	9	-0.29 \pm 0.05	-0.86 \pm 0.17		0.09 \pm 0.01	35.43 \pm 0.43
2011	G	R	75%	13	-0.3 \pm 0.04	-0.98 \pm 0.17	-0.67 \pm 0.06	0.08 \pm 0.01	35.18 \pm 1.08
2011	G	R	75%	16	-0.39 \pm 0.04	-1.07 \pm 0.18	-0.81 \pm 0.04	0.05 \pm 0.01	33.83 \pm 0.21
2011	G	R	75%	20	-0.5 \pm 0.07	-1.15 \pm 0.18	-0.72 \pm 0.06	0.07 \pm 0.01	32.38 \pm 0.4
2011	G	R	75%	27	-0.37 \pm 0.04	-0.98 \pm 0.09	-0.65 \pm 0.03	0.06 \pm 0.01	31.45 \pm 0.63
2011	G	R	75%	34	-0.46 \pm 0.03	-1.04 \pm 0.15	-0.59 \pm 0.04	0.08 \pm 0.01	29 \pm 0.57
2011	G	R	75%	48	-0.49 \pm 0.04	-0.92 \pm 0.05	-0.76 \pm 0.02	0.08 \pm 0.01	31.33 \pm 0.15
2011	G	R	75%	55	-0.5 \pm 0.03	-1.03 \pm 0.03	-0.7 \pm 0.04	0.1 \pm 0.04	33.8 \pm 0.6
2011	S	P	75%	0	-0.21 \pm 0.04	-1.27 \pm 0.03	-1.05 \pm 0.11	0.11 \pm 0.02	34.08 \pm 0.79
2011	S	P	75%	6	-0.37 \pm 0.06	-1.16 \pm 0.22	-0.99 \pm 0.16	0.13 \pm 0.03	35.6 \pm 1.42

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2011	S	P	75%	9	-0.36 \pm 0.05	-0.92 \pm 0.07		0.12 \pm 0.03	34.18 \pm 0.34
2011	S	P	75%	13	-0.38 \pm 0.04	-1.53 \pm 0.09	-0.8 \pm 0.11	0.12 \pm 0.02	33.58 \pm 0.99
2011	S	P	75%	16	-0.41 \pm 0.04	-1.21 \pm 0.3	-0.55 \pm 0.02	0.1 \pm 0.02	32.5 \pm 1.04
2011	S	P	75%	20	-0.51 \pm 0.04	-1.24 \pm 0.18	-1 \pm 0.21	0.1 \pm 0.01	33.3 \pm 1.36
2011	S	P	75%	27	-0.43 \pm 0.04	-1.42 \pm 0.27	-0.95 \pm 0.21	0.07 \pm 0.01	33.48 \pm 0.98
2011	S	P	75%	34	-0.58 \pm 0.04	-1.6 \pm 0.1	-0.72 \pm 0.04	0.12 \pm 0.02	30.1 \pm 1.28
2011	S	P	75%	48	-0.59 \pm 0.05	-1.47 \pm 0.21	-0.84 \pm 0.05	0.08 \pm 0.02	32.55 \pm 0.74
2011	S	P	75%	55	-0.59 \pm 0.06	-1.11 \pm 0.09	-0.91 \pm 0.07	0.11 \pm 0.03	34.05 \pm 1.25
2011	S	R	75%	0	-0.21 \pm 0.02	-1.11 \pm 0.13	-0.99 \pm 0.13	0.11 \pm 0.04	33.68 \pm 1.63
2011	S	R	75%	6	-0.38 \pm 0.02	-1.35 \pm 0.06	-1.16 \pm 0.15	0.09 \pm 0.02	34.58 \pm 0.8
2011	S	R	75%	9	-0.4 \pm 0.03	-0.93 \pm 0.13		0.11 \pm 0.04	36.73 \pm 1.79
2011	S	R	75%	13	-0.51 \pm 0.07	-1.27 \pm 0.19	-0.69 \pm 0.02	0.09 \pm 0.03	36.53 \pm 1.56
2011	S	R	75%	16	-0.47 \pm 0.03	-1.11 \pm 0.2	-0.67 \pm 0.02	0.08 \pm 0.02	34.85 \pm 1.09
2011	S	R	75%	20	-0.64 \pm 0.08	-1.03 \pm 0.07	-1.04 \pm 0.11	0.12 \pm 0.01	35.1 \pm 1.35
2011	S	R	75%	27	-0.44 \pm 0.02	-1.43 \pm 0.28	-0.75 \pm 0.04	0.09 \pm 0.02	34.75 \pm 0.87
2011	S	R	75%	34	-0.54 \pm 0.06	-1.21 \pm 0.23	-0.67 \pm 0.04	0.09 \pm 0.03	32.08 \pm 0.73
2011	S	R	75%	48	-0.61 \pm 0.03	-1.07 \pm 0.1	-0.78 \pm 0.02	0.11 \pm 0.04	33.93 \pm 1.31
2011	S	R	75%	55	-0.57 \pm 0.03	-1.44 \pm 0.16	-0.83 \pm 0.07	0.11 \pm 0.04	34.13 \pm 0.91
2011	G	P	100%	0	-0.218 \pm 0.028	-0.988 \pm 0.111	-0.874 \pm 0.076	0.105 \pm 0.035	33.925 \pm 0.753
2011	G	P	100%	6	-0.355 \pm 0.025	-0.833 \pm 0.045	-0.813 \pm 0.016	0.11 \pm 0.018	34.425 \pm 1.734
2011	G	P	100%	9	-0.325 \pm 0.051	-0.925 \pm 0.041		0.1 \pm 0.021	35.65 \pm 0.660
2011	G	P	100%	13	-0.525 \pm 0.078	-1.333 \pm 0.070	-0.697 \pm 0.024	0.103 \pm 0.016	34.75 \pm 0.525
2011	G	P	100%	16	-0.363 \pm 0.034	-0.688 \pm 0.069	-0.6 \pm 0.033	0.078 \pm 0.010	33.7 \pm 0.815
2011	G	P	100%	20	-0.493 \pm 0.052	-0.965 \pm 0.111	-0.675 \pm 0.015	0.063 \pm 0.010	34.85 \pm 1.485
2011	G	P	100%	27	-0.403 \pm 0.038	-1.078 \pm 0.179	-0.663 \pm 0.044	0.083 \pm 0.014	33.05 \pm 0.961
2011	G	P	100%	34	-0.49 \pm 0.023	-1.175 \pm 0.122	-0.578 \pm 0.049	0.085 \pm 0.011	29.575 \pm 1.420
2011	G	P	100%	48	-0.613 \pm 0.088	-0.908 \pm 0.079	-0.688 \pm 0.043	0.078 \pm 0.014	32.975 \pm 0.712
2011	G	P	100%	55	-0.42 \pm 0.055	-1.085 \pm 0.045	-0.693 \pm 0.030	0.09 \pm 0.025	34.05 \pm 1.096
2011	G	R	100%	0	-0.221 \pm 0.037	-1.055 \pm 0.154	-0.867 \pm 0.037	0.125 \pm 0.033	34.425 \pm 0.965
2011	G	R	100%	6	-0.3 \pm 0.022	-1.028 \pm 0.165	-0.863 \pm 0.111	0.123 \pm 0.007	34.4 \pm 1.047
2011	G	R	100%	9	-0.258 \pm 0.021	-1.353 \pm 0.106		0.115 \pm 0.011	33.8 \pm 0.141
2011	G	R	100%	13	-0.45 \pm 0.02	-1.083 \pm 0.015	-0.76 \pm 0.082	0.088 \pm 0.015	35.025 \pm 0.503
2011	G	R	100%	16	-0.308 \pm 0.023	-1.355 \pm 0.086	-0.598 \pm 0.020	0.075 \pm 0.010	33.55 \pm 0.429
2011	G	R	100%	20	-0.483 \pm 0.014	-1.07 \pm 0.064	-0.7 \pm 0.056	0.075 \pm 0.010	32.875 \pm 0.356
2011	G	R	100%	27	-0.335 \pm 0.045	-1.188 \pm 0.153	-0.64 \pm 0.054	0.078 \pm 0.021	33.025 \pm 0.392
2011	G	R	100%	34	-0.438 \pm 0.038	-0.945 \pm 0.091	-0.523 \pm 0.022	0.075 \pm 0.014	28.2 \pm 0.933
2011	G	R	100%	48	-0.675 \pm 0.051	-0.958 \pm 0.108	-0.57 \pm 0.021	0.078 \pm 0.013	31.875 \pm 0.335
2011	G	R	100%	55	-0.399 \pm 0.033	-1.051 \pm 0.166	-0.628 \pm 0.027	0.068 \pm 0.003	31.625 \pm 1.255
2011	S	P	100%	0	-0.187 \pm 0.028	-1.036 \pm 0.185	-0.99 \pm 0.156	0.11 \pm 0.027	33.6 \pm 1.053
2011	S	P	100%	6	-0.355 \pm 0.013	-1.285 \pm 0.196	-1.11 \pm 0.196	0.155 \pm 0.036	34.1 \pm 1.155
2011	S	P	100%	9	-0.31 \pm 0.034	-1.498 \pm 0.052		0.115 \pm 0.030	35.325 \pm 1.302
2011	S	P	100%	13	-0.475 \pm 0.059	-1.443 \pm 0.208	-0.94 \pm 0.110	0.123 \pm 0.042	34.9 \pm 1.071
2011	S	P	100%	16	-0.385 \pm 0.012	-1.593 \pm 0.261	-0.61 \pm 0.041	0.113 \pm 0.030	34.1 \pm 0.868
2011	S	P	100%	20	-0.493 \pm 0.050	-1.558 \pm 0.262	-0.883 \pm 0.092	0.075 \pm 0.016	33.575 \pm 1.062
2011	S	P	100%	27	-0.388 \pm 0.028	-1.37 \pm 0.246	-0.73 \pm 0.024	0.113 \pm 0.016	33.05 \pm 1.184
2011	S	P	100%	34	-0.598 \pm 0.058	-1.395 \pm 0.167	-0.623 \pm 0.052	0.098 \pm 0.025	29.15 \pm 0.748
2011	S	P	100%	48	-0.598 \pm 0.087	-1.17 \pm 0.054	-0.735 \pm 0.037	0.07 \pm 0.005	32.125 \pm 0.246
2011	S	P	100%	55	-0.415 \pm 0.022	-1.429 \pm 0.185	-0.863 \pm 0.079	0.091 \pm 0.018	32.8 \pm 0.481
2011	S	R	100%	0	-0.176 \pm 0.017	-1.144 \pm 0.101	-1.083 \pm 0.083	0.095 \pm 0.004	34.6 \pm 0.712
2011	S	R	100%	6	-0.338 \pm 0.023	-1.038 \pm 0.193	-1.183 \pm 0.114	0.12 \pm 0.038	32.775 \pm 0.523
2011	S	R	100%	9	-0.308 \pm 0.026	-0.998 \pm 0.146		0.098 \pm 0.028	37.15 \pm 0.879

Supplemental Data for:

Gerzon, E., I. Biton, Y. Yaniv, H. Zemach, Y. Netzer, A. Schwartz, A. Fait, and G. Ben-Ari. 2015.

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Am. J. Enol. Vitic. 66:340-347. doi: 10.5344/ajev.2015.14090.

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Year of experiment	Cultivar	Rootstock	Irrigation treatment	Day of experiment	Predawn Ψ_{leaf} (MPa)	Midday Ψ_{leaf} (MPa)	Midday Ψ_{stem} (MPa)	Stomatal conductance (mol/m ² s)	Midday leaf temperature (°C)
2011	S	R	100%	13	-0.53 \pm 0.027	-1.278 \pm 0.244	-0.75 \pm 0.065	0.113 \pm 0.034	35.05 \pm 1.292
2011	S	R	100%	16	-0.41 \pm 0.047	-1.063 \pm 0.076	-0.828 \pm 0.121	0.1 \pm 0.024	35.6 \pm 0.527
2011	S	R	100%	20	-0.57 \pm 0.047	-1.073 \pm 0.187	-0.81 \pm 0.046	0.093 \pm 0.021	36.025 \pm 1.061
2011	S	R	100%	27	-0.435 \pm 0.044	-1.34 \pm 0.283	-0.69 \pm 0.059	0.088 \pm 0.046	33.075 \pm 1.245
2011	S	R	100%	34	-0.6 \pm 0.047	-1.39 \pm 0.198	-0.633 \pm 0.029	0.095 \pm 0.025	28.925 \pm 1.074
2011	S	R	100%	48	-0.668 \pm 0.041	-1.253 \pm 0.013	-0.798 \pm 0.023	0.085 \pm 0.015	32.6 \pm 0.821
2011	S	R	100%	55	-0.513 \pm 0.027	-1.3 \pm 0.197	-0.869 \pm 0.020	0.105 \pm 0.026	32 \pm 0.558
2012	G	P	DI	0	-0.086 \pm 0.019	-1.041 \pm 0.014	-0.545 \pm 0.042	0.239 \pm 0.039	34.965 \pm 0.148
2012	G	P	DI	3	-0.08 \pm 0.014	-1.103 \pm 0.061	-0.504 \pm 0.042	0.177 \pm 0.035	35.753 \pm 0.344
2012	G	P	DI	10	-0.099 \pm 0.010	-0.956 \pm 0.085	-0.705 \pm 0.047	0.081 \pm 0.011	36.062 \pm 0.976
2012	G	P	DI	17	-0.235 \pm 0.011	-0.815 \pm 0.066	-0.848 \pm 0.056	0.037 \pm 0.004	38.147 \pm 0.292
2012	G	P	DI	24	-0.346 \pm 0.020	-1.135 \pm 0.097	-0.769 \pm 0.074	0.034 \pm 0.003	38.406 \pm 0.571
2012	G	P	DI	31	-0.393 \pm 0.052	-1.109 \pm 0.090	-0.895 \pm 0.063	0.089 \pm 0.014	34.813 \pm 0.020
2012	G	P	DI	38	-0.368 \pm 0.032	-1.051 \pm 0.056	-0.825 \pm 0.059	0.059 \pm 0.012	40.552 \pm 0.634
2012	G	P	DI	45	-0.394 \pm 0.040	-0.968 \pm 0.107	-0.833 \pm 0.059	0.065 \pm 0.011	35.849 \pm 1.001
2012	G	P	DI	52	-0.364 \pm 0.045	-1.046 \pm 0.083		0.053 \pm 0.012	38.127 \pm 0.166
2012	G	P	DI	59	-0.335 \pm 0.048	-0.84 \pm 0.104	-0.75 \pm 0.024	0.077 \pm 0.013	37.305 \pm 0.065
2012	G	R	DI	0	-0.081 \pm 0.015	-1.154 \pm 0.149	-0.592 \pm 0.051	0.281 \pm 0.033	34.939 \pm 0.125
2012	G	R	DI	3	-0.06 \pm 0.009	-1.108 \pm 0.151	-0.571 \pm 0.031	0.223 \pm 0.031	35.251 \pm 0.292
2012	G	R	DI	10	-0.091 \pm 0.015	-0.928 \pm 0.064	-0.766 \pm 0.047	0.15 \pm 0.042	35.489 \pm 0.491
2012	G	R	DI	17	-0.251 \pm 0.079	-0.725 \pm 0.049	-0.873 \pm 0.037	0.057 \pm 0.019	37.955 \pm 0.425
2012	G	R	DI	24	-0.349 \pm 0.092	-1.028 \pm 0.124	-0.821 \pm 0.041	0.026 \pm 0.008	38.495 \pm 0.424
2012	G	R	DI	31	-0.44 \pm 0.129	-0.889 \pm 0.051	-1.008 \pm 0.109	0.072 \pm 0.019	34.837 \pm 0.019
2012	G	R	DI	38	-0.381 \pm 0.060	-0.989 \pm 0.038	-0.934 \pm 0.101	0.041 \pm 0.013	40.641 \pm 0.498
2012	G	R	DI	45	-0.429 \pm 0.083	-0.989 \pm 0.086	-0.88 \pm 0.061	0.073 \pm 0.015	35.994 \pm 1.139
2012	G	R	DI	52	-0.438 \pm 0.063	-0.966 \pm 0.031	\pm	0.049 \pm 0.008	38.038 \pm 0.076
2012	G	R	DI	59	-0.394 \pm 0.056	-0.915 \pm 0.073	-0.835 \pm 0.068	0.093 \pm 0.003	36.884 \pm 0.105
2012	S	P	DI	0	-0.093 \pm 0.015	-0.959 \pm 0.067	-0.513 \pm 0.054	0.191 \pm 0.045	35.277 \pm 0.585
2012	S	P	DI	3	-0.103 \pm 0.028	-1.156 \pm 0.077	-0.533 \pm 0.043	0.172 \pm 0.012	35.619 \pm 0.268
2012	S	P	DI	10	-0.083 \pm 0.005	-0.953 \pm 0.026	-0.79 \pm 0.094	0.092 \pm 0.025	36.817 \pm 0.419
2012	S	P	DI	17	-0.169 \pm 0.022	-0.823 \pm 0.057	-0.88 \pm 0.073	0.045 \pm 0.007	38.382 \pm 0.197
2012	S	P	DI	24	-0.303 \pm 0.045	-1.075 \pm 0.069	-0.828 \pm 0.086	0.024 \pm 0.004	39.001 \pm 0.296
2012	S	P	DI	31	-0.325 \pm 0.066	-1.146 \pm 0.212	-1.126 \pm 0.103	0.062 \pm 0.020	34.77 \pm 0.023
2012	S	P	DI	38	-0.361 \pm 0.045	-1.248 \pm 0.082	-0.921 \pm 0.070	0.05 \pm 0.006	40.974 \pm 0.212
2012	S	P	DI	45	-0.413 \pm 0.028	-1.023 \pm 0.127	-0.993 \pm 0.064	0.053 \pm 0.009	35.116 \pm 0.264
2012	S	P	DI	52	-0.5 \pm 0.064	-1.305 \pm 0.103		0.046 \pm 0.008	37.934 \pm 0.344
2012	S	P	DI	59	-0.449 \pm 0.032	-0.918 \pm 0.066	-0.885 \pm 0.047	0.074 \pm 0.011	37.193 \pm 0.228
2012	S	R	DI	0	-0.088 \pm 0.007	-1.07 \pm 0.043	-0.613 \pm 0.046	0.308 \pm 0.079	34.799 \pm 0.398
2012	S	R	DI	3	-0.095 \pm 0.013	-1.144 \pm 0.092	-0.604 \pm 0.029	0.145 \pm 0.034	35.895 \pm 0.266
2012	S	R	DI	10	-0.081 \pm 0.003	-1.094 \pm 0.095	-0.803 \pm 0.011	0.125 \pm 0.049	36.011 \pm 0.417
2012	S	R	DI	17	-0.178 \pm 0.044	-0.905 \pm 0.100	-1.141 \pm 0.088	0.054 \pm 0.015	38.193 \pm 0.197
2012	S	R	DI	24	-0.343 \pm 0.049	-1.104 \pm 0.049	-0.995 \pm 0.029	0.074 \pm 0.020	38.381 \pm 0.362
2012	S	R	DI	31	-0.395 \pm 0.062	-1.245 \pm 0.168	-1.331 \pm 0.212	0.07 \pm 0.031	34.799 \pm 0.016
2012	S	R	DI	38	-0.453 \pm 0.048	-1.148 \pm 0.236	-0.951 \pm 0.058	0.076 \pm 0.014	41.077 \pm 0.299
2012	S	R	DI	45	-0.564 \pm 0.045	-1.163 \pm 0.167	-1.021 \pm 0.091	0.058 \pm 0.026	36.037 \pm 1.148
2012	S	R	DI	52	-0.59 \pm 0.031	-1.098 \pm 0.133		0.074 \pm 0.027	37.753 \pm 0.242
2012	S	R	DI	59	-0.523 \pm 0.039	-1.113 \pm 0.082	-1.013 \pm 0.069	0.078 \pm 0.021	37.261 \pm 0.256
2012	G	P	control	0	-0.086 \pm 0.019	-1.041 \pm 0.014	-0.545 \pm 0.042	0.239 \pm 0.039	34.965 \pm 0.148
2012	G	P	control	3	-0.084 \pm 0.010	-1.074 \pm 0.018	-0.548 \pm 0.027	0.206 \pm 0.023	35.513 \pm 0.287
2012	G	P	control	10	-0.079 \pm 0.010	-0.986 \pm 0.034	-0.62 \pm 0.039	0.219 \pm 0.026	35.637 \pm 0.581
2012	G	P	control	17	-0.084 \pm 0.005	-0.78 \pm 0.023	-0.708 \pm 0.026	0.143 \pm 0.010	37.001 \pm 0.184

Supplemental Data for:

Gerzon, E., I. Biton, Y. Yaniv, H. Zemach, Y. Netzer, A. Schwartz, A. Fait, and G. Ben-Ari. 2015.

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Am. J. Enol. Vitic. 66:340-347. doi: 10.5344/ajev.2015.14090.

Supplemental Table 1 All physiological measurements carried out during 2011 and 2012 experiments. Values are mean ± standard errors.

Year of experiment	Cultivar	Rootstock	Irrigation treatment	Day of experiment	Predawn Ψ leaf (MPa)	Midday Ψ leaf (MPa)	Midday Ψ stem (MPa)	Stomatal conductance (mol/m ² s)	Midday leaf temperature (°C)
2012	G	P	control	24	-0.084±0.003	-0.899±0.035	-0.635±0.039	0.175±0.009	37.414±0.264
2012	G	P	control	31	-0.083±0.008	-0.708±0.072	-0.785±0.046	0.176±0.020	34.829±0.018
2012	G	P	control	38	-0.113±0.012	-0.883±0.101	-0.806±0.083	0.103±0.019	41.09±0.243
2012	G	P	control	45	-0.153±0.008	-0.843±0.031	-0.695±0.092	0.13±0.012	36.044±1.166
2012	G	P	control	52	-0.2±0.033	-0.828±0.053		0.105±0.011	37.209±0.182
2012	G	P	control	59	-0.2±0.022	-0.694±0.035	-0.733±0.163	0.11±0.020	36.843±0.266
2012	G	R	control	0	-0.081±0.015	-1.154±0.149	-0.592±0.051	0.281±0.033	34.939±0.125
2012	G	R	control	3	-0.075±0.005	-1.113±0.061	-0.578±0.087	0.272±0.012	35.011±0.252
2012	G	R	control	10	-0.073±0.014	-1.068±0.076	-0.623±0.109	0.247±0.031	36.003±0.285
2012	G	R	control	17	-0.076±0.005	-0.856±0.020	-0.708±0.089	0.178±0.006	36.736±0.274
2012	G	R	control	24	-0.119±0.020	-0.883±0.071	-0.705±0.034	0.178±0.015	37.479±0.186
2012	G	R	control	31	-0.118±0.011	-0.938±0.054	-0.869±0.056	0.173±0.016	34.84±0.015
2012	G	R	control	38	-0.156±0.010	-0.846±0.064	-0.77±0.106	0.129±0.003	41.205±0.235
2012	G	R	control	45	-0.195±0.044	-0.819±0.030	-0.75±0.063	0.176±0.006	34.858±0.017
2012	G	R	control	52	-0.13±0.026	-0.888±0.082		0.158±0.005	36.932±0.069
2012	G	R	control	59	-0.245±0.013	-0.714±0.078	-0.67±0.025	0.134±0.008	36.713±0.157
2012	S	P	control	0	-0.093±0.015	-0.959±0.067	-0.513±0.054	0.191±0.045	35.277±0.585
2012	S	P	control	3	-0.138±0.028	-1.243±0.050	-0.528±0.059	0.21±0.029	35.18±0.362
2012	S	P	control	10	-0.086±0.005	-1.045±0.057	-0.483±0.061	0.201±0.040	35.437±0.550
2012	S	P	control	17	-0.101±0.009	-0.775±0.063	-0.768±0.034	0.144±0.011	36.838±0.156
2012	S	P	control	24	-0.155±0.025	-0.974±0.059	-0.759±0.066	0.256±0.033	36.832±0.550
2012	S	P	control	31	-0.134±0.023	-1.075±0.063	-1.06±0.142	0.172±0.037	34.831±0.009
2012	S	P	control	38	-0.255±0.035	-1.158±0.026	-0.856±0.054	0.148±0.013	40.907±0.436
2012	S	P	control	45	-0.23±0.018	-0.953±0.043	-0.793±0.062	0.211±0.016	36.041±1.166
2012	S	P	control	52	-0.225±0.026	-1.123±0.068		0.146±0.030	37.1±0.193
2012	S	P	control	59	-0.328±0.026	-1.029±0.070	-0.826±0.044	0.18±0.021	36.494±0.254
2012	S	R	control	0	-0.088±0.007	-1.07±0.043	-0.613±0.046	0.308±0.079	34.799±0.398
2012	S	R	control	3	-0.126±0.023	-1.239±0.060	-0.596±0.059	0.25±0.028	34.837±0.524
2012	S	R	control	10	-0.086±0.015	-0.906±0.111	-0.626±0.037	0.261±0.043	35.383±0.500
2012	S	R	control	17	-0.124±0.042	-0.689±0.064	-0.819±0.056	0.217±0.026	36.434±0.211
2012	S	R	control	24	-0.17±0.037	-1.23±0.063	-0.77±0.096	0.262±0.031	37.048±0.295
2012	S	R	control	31	-0.164±0.050	-1.065±0.154	-1.005±0.097	0.261±0.036	34.833±0.016
2012	S	R	control	38	-0.273±0.074	-0.969±0.137	-0.806±0.102	0.17±0.026	40.781±0.613
2012	S	R	control	45	-0.261±0.073	-0.936±0.097	-1.003±0.053	0.23±0.031	34.867±0.013
2012	S	R	control	52	-0.211±0.044	-1.144±0.116		0.193±0.051	36.855±0.342
2012	S	R	control	59	-0.344±0.085	-0.903±0.119	-0.821±0.081	0.193±0.054	36.153±0.527

Supplemental Data for:

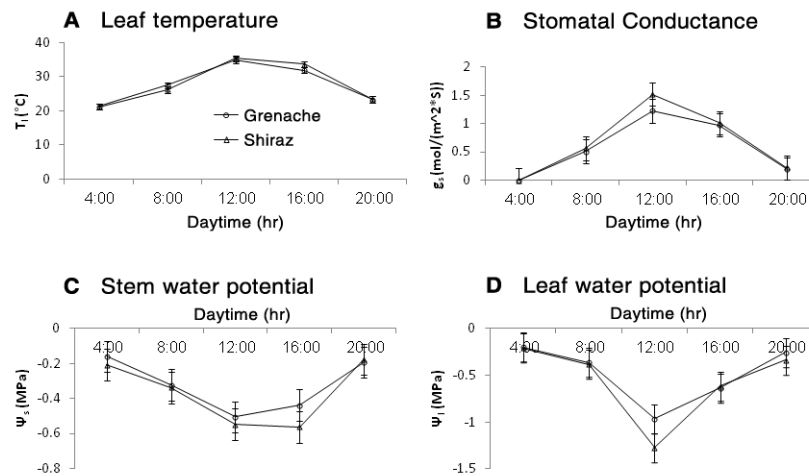
Gerzon, E., I. Biton, Y. Yaniv, H. Zemach, Y. Netzer, A. Schwartz, A. Fait, and G. Ben-Ari. 2015. Grapevine anatomy as a possible determinant of isohydric or anisohydric behavior. *Am. J. Enol. Vitic.* 66:340-347. doi: 10.5344/ajev.2015.14090.

Supplemental Table 2 Correlation coefficients between noon Ψ_l (Ψ_l) and evapotranspiration (E), predawn water potential (Ψ_{PD}), stem water potential (Ψ_s), stomatal conductance (g_s), and photosynthetic CO_2 assimilation (A), respectively, under well-watered (control) and deficit-irrigated (DI) conditions.

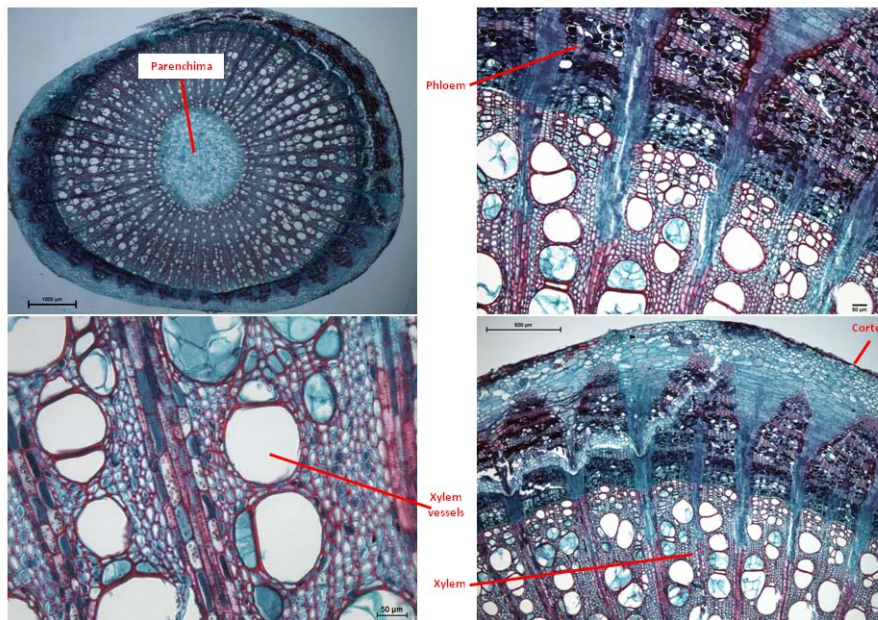
Parameter	Parameter	Correlation coefficient
Grenache DI		
Ψ_l	E	-0.2568
Ψ_l	Ψ_{PD}	0.0413
Ψ_l	Ψ_s	-0.2636
Ψ_l	g_s	-0.2616
Ψ_l	A	-0.0915
Grenache control		
Ψ_l	E	-0.8691
Ψ_l	Ψ_{PD}	-0.4826
Ψ_l	Ψ_s	-0.8478
Ψ_l	g_s	-0.6912
Ψ_l	A	-0.5317
Shiraz DI		
Ψ_l	E	0.0579
Ψ_l	Ψ_{PD}	0.4331
Ψ_l	Ψ_s	0.1869
Ψ_l	g_s	0.1277
Ψ_l	A	0.2274
Shiraz control		
Ψ_l	E	-0.2
Ψ_l	Ψ_{PD}	0.2654
Ψ_l	Ψ_s	-0.0362
Ψ_l	g_s	-0.0114
Ψ_l	A	-0.0104

Supplemental Data for:

Gerzon, E., I. Biton, Y. Yaniv, H. Zemach, Y. Netzer, A. Schwartz, A. Fait, and G. Ben-Ari. 2015. Grapevine anatomy as a possible determinant of isohydric or anisohydric behavior. *Am. J. Enol. Vitic.* 66:340-347. doi: 10.5344/ajev.2015.14090.



Supplemental Figure 1 The cultivars Grenache and Shiraz expressed distinct physiological characteristic at noon: Diurnal fluctuations of T_l (A), g_s (B), Ψ_s (C), and Ψ_l (D). Each cultivar is represented by a different symbol (circles indicate Grenache and triangles indicate Shiraz). Error bars represent 95% confidence intervals.



Supplemental Figure 2 Light microscopic images of the stem and xylem of Shiraz plants.