

Supplemental Table S1. Two-way analysis of variance (ANOVA) showing senescence (leaf chlorosis and abscission) tracking during the 2021 growing season ($n = 12$) by treatment and vine age. Treatment means followed by the standard error of the mean. Different letters within a column indicate differences between treatment groups based on Student's t -test ($n = 12$). Significant p -values (<0.05) are shown in the table.

Growth Stage		Degree of Leaf Chlorosis	Degree of Leaf Abscission
Harvest	Treatment		
	Irrigated	1.25 ± 0.13 a	0.39 ± 0.11 a
	Dry-farmed	1.17 ± 0.12 a	0.67 ± 0.14 a
	Vine Age		
	Young	1.63 ± 0.18 a	0.79 ± 0.19 a
	Old	0.96 ± 0.11 b	0.29 ± 0.11 ab
	Control	1.04 ± 0.13 b	0.50 ± 0.15 b
	<i>p-value</i>	0.0119	0.0320
	Treatment (T)	0.6138	0.1104
	Vine Age (A)	0.0026	0.0647
T x A		0.2609	0.1001
Harvest + 2 weeks	Treatment		
	Irrigated	1.42 ± 0.13 a	0.83 ± 0.20 a
	Dry-farmed	1.42 ± 0.12 a	0.81 ± 0.15 a
	Vine Age		
	Young	1.75 ± 0.19 a	1.38 ± 0.27 a
	Old	1.17 ± 0.08 b	0.375 ± 0.13 b
	Control	1.33 ± 0.13 b	0.71 ± 0.16 b
	<i>p-value</i>	0.1104	0.0109
	Treatment (T)	1.0000	0.9044
	Vine Age (A)	0.0167	0.0026
T x A		0.7165	0.2042
Harvest + 4 weeks	Treatment		
	Irrigated	2.33 ± 0.18 a	1.22 ± 0.18 a
	Dry-farmed	2.14 ± 0.13 a	1.25 ± 0.14 a
	Vine Age		
	Young	2.67 ± 0.25 a	1.58 ± 0.25 a
	Old	2.00 ± 0.10 b	1.04 ± 0.11 a
	Control	2.04 ± 0.19 b	1.08 ± 0.19 a
	<i>p-value</i>	0.0962	0.3812
	Treatment (T)	0.3762	0.9021
	Vine Age (A)	0.0250	0.0990
T x A		0.5521	0.7493
Harvest + 6 weeks	Treatment		
	Irrigated	2.78 ± 0.19 a	2.11 ± 0.17 a
	Dry-farmed	2.64 ± 0.17 a	1.89 ± 0.18 a
	Vine Age		
	Young	3.33 ± 0.26 a	2.50 ± 0.28 a
	Old	2.29 ± 0.13 b	1.88 ± 0.07 b
	Control	2.50 ± 0.20 b	1.63 ± 0.19 b
	<i>p-value</i>	0.0140	0.0611
	Treatment (T)	0.5609	0.3456
	Vine Age (A)	0.0015	0.0099
T x A		0.6565	0.8329
Dormancy	Treatment		
	Irrigated	4.25 ± 0.20 a	3.64 ± 0.26 a
	Dry-farmed	3.89 ± 0.22 a	3.25 ± 0.26 a
	Vine Age		
	Young	4.79 ± 0.23 a	4.04 ± 0.33 a

Old	3.46 ± 0.25 b	2.96 ± 0.29 ab
Control	3.96 ± 0.24 b	3.33 ± 0.32 b
<i>p-value</i>	0.0068	0.2116
Treatment (T)	0.1951	0.2904
Vine Age (A)	0.0008	0.0550
T x A	0.9603	0.9275

Supplemental Table S2. Two-way analysis of variance (ANOVA) showing leaf water potential measurements at véraison (07/23/21) and at véraison + 4 weeks (08/20/21). Treatment means followed by standard error of the mean. Different letters within a column indicate significant differences between treatment groups based on Student's *t*-test (*n* = 3). Significant *p*-values (< 0.05) are shown in bold fonts.

Growth Stage		Pre-dawn Ψ_{leaf} (MPa)	Mid-day Ψ_{leaf} (MPa)
Véraison	Treatment		
	Irrigated	4.67 ± 0.31 a	10.89 ± 0.25 a
	Dry-farmed	4.67 ± 0.24 a	11.33 ± 0.17 a
	Vine Age		
	Young	4.42 ± 0.35 a	11.17 ± 0.25 a
	Old	5.00 ± 0.37 a	11.17 ± 0.25 a
	Control	4.58 ± 0.27 a	11.00 ± 0.34 a
	<i>p-value</i>	0.7091	0.8176
	Treatment (T)	1.000	0.2130
	Vine Age (A)	0.4995	0.8984
	T x A	0.4995	0.8984
Véraison + 4 weeks	Treatment		
	Irrigated	4.12 ± 0.19 a	10.04 ± 0.24 a
	Dry-farmed	4.88 ± 0.20 b	10.16 ± 0.37 a
	Vine Age		
	Young	4.15 ± 0.27 a	9.65 ± 0.38 a
	Old	4.83 ± 0.32 a	10.48 ± 0.43 a
	Control	4.52 ± 0.21 a	10.17 ± 0.26 a
	<i>p-value</i>	0.0481	0.1959
	Treatment (T)	0.0116	0.7786
	Vine Age (A)	0.1314	0.2461
	T x A	0.3851	0.1020

Supplemental Table S3. Two-way analysis of variance (ANOVA) with interaction showing measurements by vine age and treatment. Treatment means followed by standard error of the mean. Different letters within a column indicate significant differences between treatment groups based on Student's *t*-test (*n* = 12). Significant *p*-values (< 0.05) are shown in bold fonts.

	Cluster count per vine	Yield per vine (kg)	Pruning weights per vine (kg)	Ravaz index
Treatment				
Irrigated	55.21 ± 4.62 a	8.74 ± 0.85 a	1.14 ± 0.07 a	8.04 ± 0.71 a
Dry-farmed	50.36 ± 3.36 a	6.96 ± 0.53 a	1.06 ± 0.08 a	8.36 ± 0.73 a
Vine Age				
Young	33.67 ± 1.72 b	5.70 ± 0.41 b	1.23 ± 0.08 a	5.05 ± 0.41 c
Old	64.48 ± 4.93 a	8.98 ± 1.01 a	0.95 ± 0.10 b	11.09 ± 0.84 a
Control	60.21 ± 4.82 a	8.87 ± 0.95 a	1.13 ± 0.09 ab	8.46 ± 0.83 b
<i>p-value</i>	<0.0001	0.0062	0.2224	<0.0001
Treatment (T)	0.3069	0.0594	0.4545	0.7012
Vine Age (A)	<0.0001	0.0062	0.1151	<0.0001
T x A	0.4334	0.1261	0.3464	0.5439

Supplemental Table S4. Berry fresh weight, dry weight, and seed weight/number analysis on a per single berry basis. Two-way analysis of variance (ANOVA) showing treatment means followed by standard error of the mean. Measurements by treatment and vine age with interaction effects. Different letters within a column indicate significant differences between treatment groups based on Student's *t*-test (*n* = 12). Significant *p*-values (< 0.05) are shown in bold fonts.

	Fresh weight (g)	Fresh skin weight (g)	Fresh seed weight (g)	Seeds per berry	Dried skin weight (g)	Dried seed weight (g)
Treatment						
Irrigated	1.80 ± 0.04 a	0.13 ± 0.01 a	0.07 ± 0.00 a	1.97 ± 0.04 a	0.05 ± 0.00 a	0.05 ± 0.00 a
Dry-farmed	1.89 ± 0.03 a	0.13 ± 0.01 a	0.06 ± 0.00 a	2.07 ± 0.04 a	0.05 ± 0.00 a	0.05 ± 0.00 a
Vine Age						
Young	1.80 ± 0.04 a	0.15 ± 0.01 a	0.07 ± 0.00 a	2.09 ± 0.05 a	0.06 ± 0.01 a	0.05 ± 0.00 a
Old	1.90 ± 0.04 a	0.13 ± 0.01 b	0.06 ± 0.00 a	1.95 ± 0.06 a	0.05 ± 0.00 b	0.05 ± 0.00 a
Control	1.83 ± 0.05 a	0.11 ± 0.01 b	0.07 ± 0.00 a	2.02 ± 0.05 a	0.05 ± 0.00 b	0.05 ± 0.00 a
<i>p-value</i>	0.1619	0.0030	0.7708	0.2060	0.0077	0.9588
Treatment (T)	0.0617	1.0000	0.4930	0.1452	0.1004	0.5298
Vine Age (A)	0.2271	0.0007	0.6186	0.1657	0.0058	0.9562
T x A	0.3861	0.0738	0.6186	0.4052	0.0521	0.7965

Supplemental Table S5. Berry analysis at harvest, displaying Brix, pH, and TA. One-way analysis of variance (ANOVA) showing treatment means followed by standard error of the mean. Different letters within a column indicate significant differences between treatment groups based on Student's *t*-test (*n* = 3). Significant *p*-values (< 0.05) are shown in bold fonts.

	Brix	pH	Titrateable Acidity (TA) (g/L)
Treatment			
Irrigated	23.44 ± 0.35 a	3.49 ± 0.04 a	6.63 ± 0.19 a
Dry-farmed	23.18 ± 0.27 a	3.47 ± 0.01 a	6.30 ± 0.12 a

Vine Age			
Young	23.62 ± 0.16 a	3.54 ± 0.02 a	6.95 ± 0.12 a
Old	23.08 ± 0.39 a	3.45 ± 0.02 b	5.90 ± 0.04 c
Control	23.23 ± 0.52 a	3.44 ± 0.04 b	6.55 ± 0.10 b
<i>p-value</i>	0.9248	0.0894	<.0001
Treatment (T)	0.5959	0.6629	<.0001
Vine Age (A)	0.6658	0.0435	<.0001
T x A	0.9163	0.1723	0.0112

Supplemental Table S6. Research Lab 2021 berry composition parameters at harvest. Two-way analysis of variance (ANOVA) showing treatment means followed by standard error of the mean. Measurements by treatment and vine age with interaction effects. Different letters within a column indicate significant differences between treatment groups based on Student's *t*-test (*n* = 3). Significant *p*-values (< 0.05) are shown in bold fonts.

	L-Malic acid (g/L)	Tartaric acid (g/L)	Glucose + Fructose (g/L)	Ammonia (mg/L)	Alpha-amino compounds (as N) (mg/L)	Yeast assimilable nitrogen (mg/L)	Potassium (mg/L)
Treatment							
Irrigated	2.25 ± 0.29 a	6.88 ± 0.06 a	238.33 ± 4.21 a	135.67 ± 12.34 a	153.00 ± 11.37 a	264.78 ± 17.96 a	1958.89 ± 107.41 a
Dry-farmed	1.82 ± 0.12 b	6.90 ± 0.04 a	235.44 ± 3.27 a	147.00 ± 8.31 a	150.67 ± 7.31 a	271.67 ± 13.91 a	1911.11 ± 26.59 a
Vine Age							
Young	2.74 ± 0.21 a	6.95 ± 0.04 a	239.50 ± 2.00 a	174.83 ± 2.33 a	185.00 ± 3.44 a	329.00 ± 2.56 a	2070.00 ± 44.12 a
Old	1.45 ± 0.05 c	6.82 ± 0.06 a	234.67 ± 4.91 a	119.00 ± 2.91 b	127.67 ± 4.81 b	225.67 ± 7.07 c	1808.33 ± 42.93 a
Control	1.93 ± 0.21 b	6.90 ± 0.08 a	236.50 ± 6.24 a	130.17 ± 13.70 b	142.83 ± 6.74 c	250.00 ± 4.63 b	1926.67 ± 138.10 a
<i>p-value</i>	<.0001	0.7128	0.9695	0.0110	<.0001	<.0001	0.3166
Treatment (T)	0.0079	0.7778	0.6391	0.2795	0.6770	0.1969	0.6514
Vine Age (A)	<.0001	0.3896	0.8056	0.0016	<.0001	<.0001	0.1588
T x A	0.0279	0.6816	0.9195	0.9356	0.0949	0.0721	0.3766