

Table S1. Yearly (2008 and 2009) meteorological data and bioclimatic indices of the experimental site in south-eastern Spain (Requena, Valencia).

Index	2008		2009	
	Viticulture climate	Value	Viticulture climate	Value
HI: Heliothermal	Temperate warm (HI+1)	2109	Temperate warm (HI+1)	2271
CI: Night cold (°C)	Temperate nights (CI-1)	14.5	Temperate nights (CI-1)	14.7
DI: Dryness (mm)	Sub-humid (DI-1)	76.2	Moderately dry (DI+1)	-79.4
Variable	Seasonal ^a	Annual	Seasonal ^a	Annual
Max T (°C)	25.5	19.4	26.7	20.4
Mean T (°C)	17.5	12.3	18.3	13.0
Min T (°C)	10.7	6.6	10.9	6.7
Rainfall (mm)	329.0	583.0	118.4	395.6
Thermal integral ^b	1394.3	1504.5	1614.1	1672.0

^aData recorded from April to September. ^bCalculated as growing degree days (Base 10°)

Table S2. Influence of early leaf removal on Tempranillo yield and berry components.

Variable	Treatment (T) ^a	Year		Interannual mean	Statistical significance ^b		
		2008	2009		T	Year	T×Year
Berry weight (g)	C	2.07 ^d	1.90 ^b	1.99 ^c			
	ED	1.86 ^b	1.72 ^{ab}	1.79 ^{ab}			
	LD	1.74 ^a	1.59 ^a	1.66 ^a	***	**	ns
	EED	1.92 ^c	1.82 ^{ab}	1.87 ^{bc}			
Grape skin fresh weight (g/berry)	C	0.40 ^c	0.21 ^a	0.31 ^a			
	ED	0.36 ^{ab}	0.21 ^a	0.28 ^a			
	LD	0.34 ^a	0.21 ^a	0.27 ^a	ns	***	ns
	EED	0.37 ^b	0.24 ^a	0.31 ^a			
Pulp and seed fresh weight (g/berry)	C	1.67 ^d	1.69 ^b	1.68 ^c			
	ED	1.50 ^b	1.51 ^{ab}	1.50 ^{ab}			
	LD	1.40 ^a	1.38 ^a	1.39 ^a	***	ns	ns
	EED	1.55 ^c	1.58 ^{ab}	1.56 ^{bc}			
Skin-to-berry ratio (%)	C	19.32 ^a	11.05 ^a	15.20 ^a			
	ED	19.35 ^a	12.21 ^a	15.65 ^a			
	LD	19.54 ^a	13.21 ^a	16.32 ^a	ns	***	ns
	EED	19.27 ^a	13.19 ^a	16.25 ^a			
Yield (t ha ⁻¹)	C	11.10 ^b	9.20 ^b	10.10 ^c			
	ED	8.60 ^a	4.60 ^a	6.60 ^a			
	LD	8.20 ^a	5.00 ^a	6.60 ^a	***	***	ns
	EED	9.30 ^{ab}	6.70 ^a	8.00 ^b			

Data are average values (n = 16). Within each column: different letters indicate significant difference among treatments after Tukey test ($p < 0.05$). ^a C: Control, no defoliated. ED and LD: all leaves from the first 6 nodes were eliminated just before flowering and at fruit-set respectively. EED: only the leaves facing east of the 8 first nodes were removed just before flowering. ^b *, **, ***: statistical differences at $p < 0.05$, 0.01, 0.001 respectively; ns: not significant. ^c Yield data are obtained from Risco *et al.* (2014).