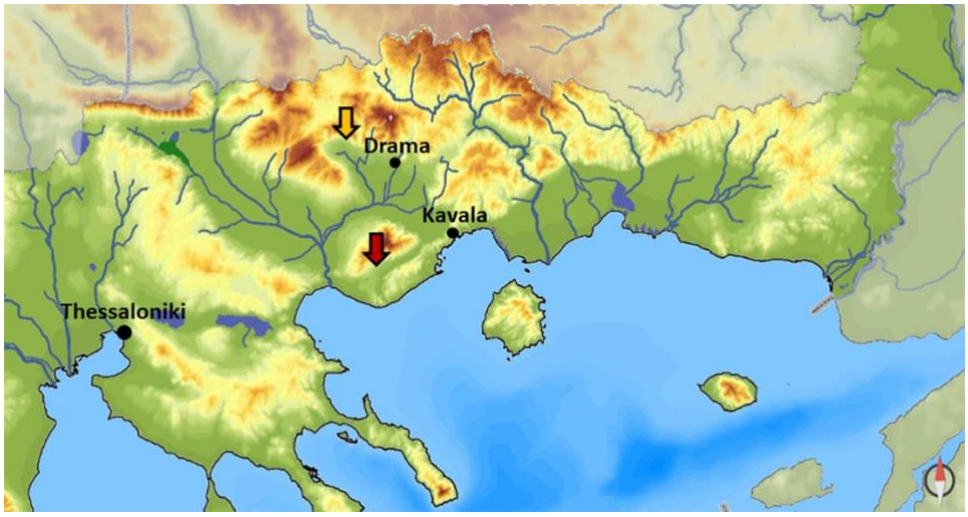
Alatzas, A., Theocharis, S., Miliordos, D.-E., Tsaktsarlis, V., Chronis, I., Kotseridis, Y., Koundouras, S., & Hatzopoulos, P. (2024). Defoliation at berry set alters grape composition and gene expression during berry development in two Greek *Vitis vinifera* L. cultivars. *OENO One*, *58*(2). https://doi.org/10.20870/oeno-one.2024.58.2.7790

Supplementary data

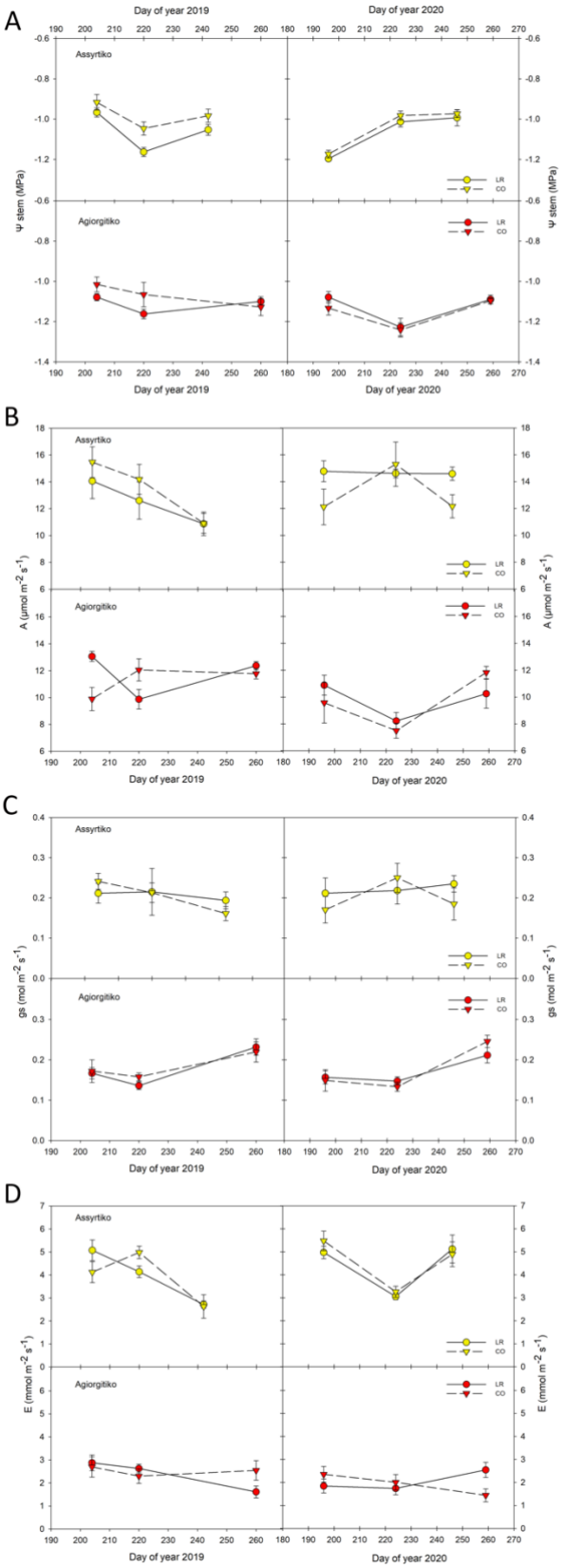


SUPPLEMENTARY FIGURE 1. The defoliation treatment applied on grapevines. A representative picture of non- defoliated (left) and defoliated vines (right).



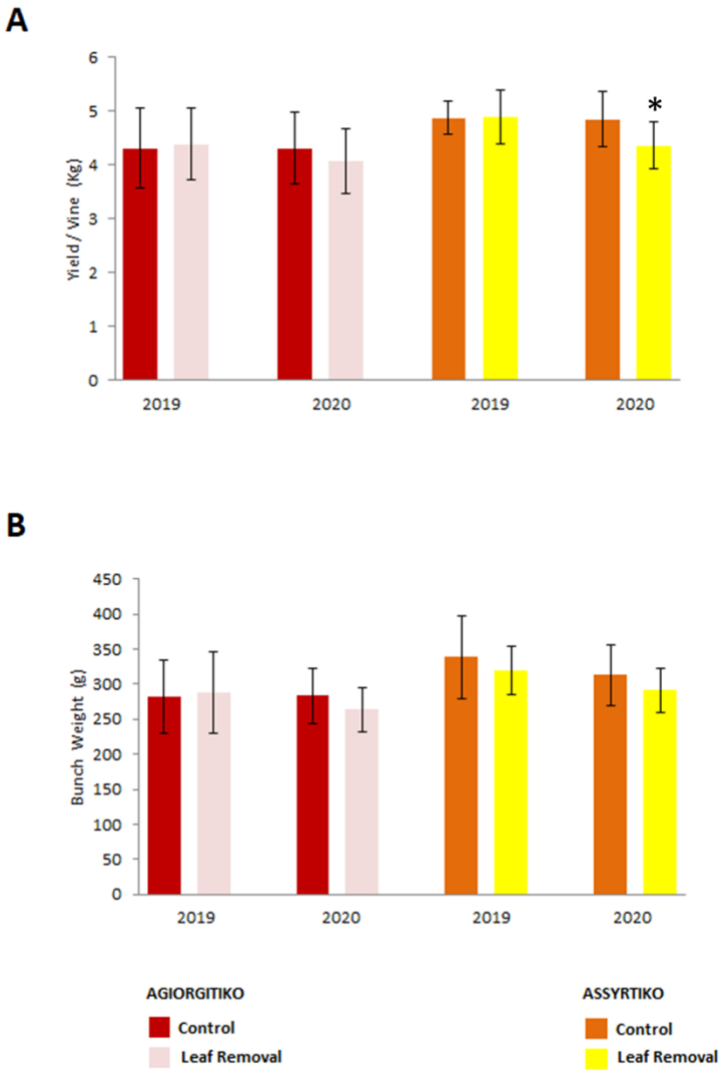
SUPPLEMENTARY FIGURE 2. Map of Northern Greece showing the location of the experimental vineyards of Agiorgitiko (red arrow) and Assyrtiko (yellow arrow).

Alatzas, A., Theocharis, S., Miliordos, D.-E., Tsaktsarlis, V., Chronis, I., Kotseridis, Y., Koundouras, S., & Hatzopoulos, P. (2024). Defoliation at berry set alters grape composition and gene expression during berry development in two Greek *Vitis vinifera* L. cultivars. *OENO One*, *58*(2). https://doi.org/10.20870/oeno-one.2024.58.2.7790

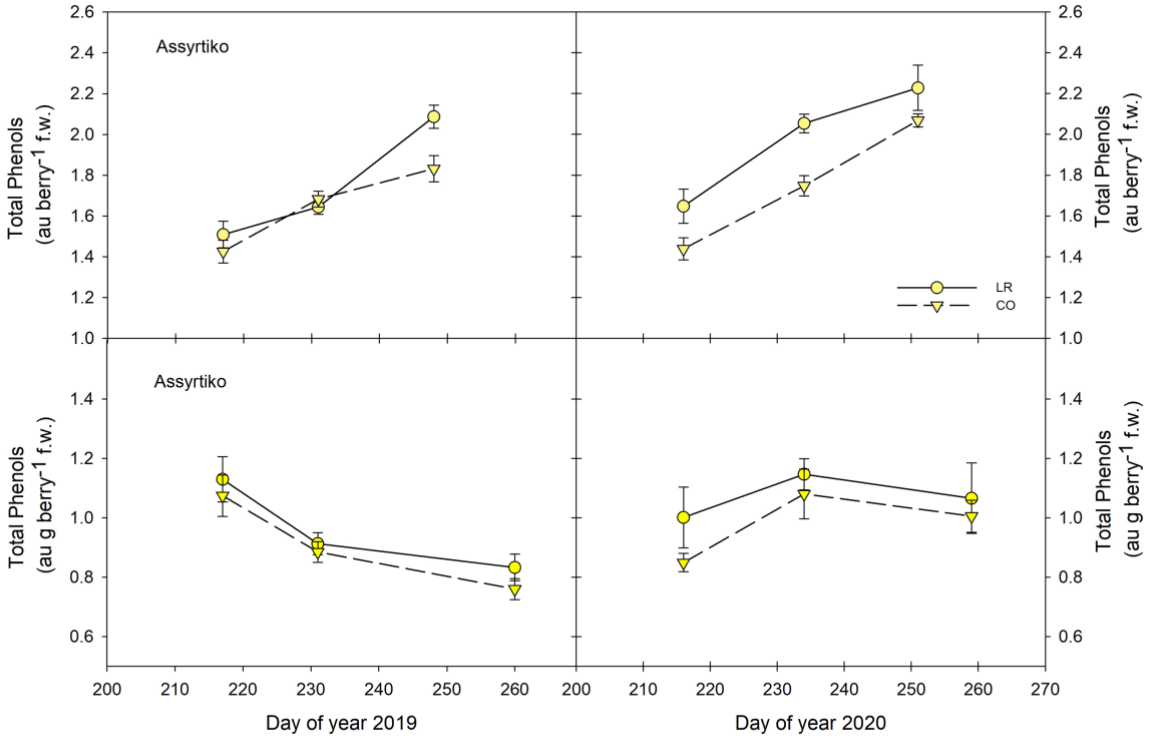


SUPPLEMENTARY FIGURE 3. The grapevine water status during ripening. A. stem water potential (Ψstem) B. net assimilation rate (A) C. stomatal conductance (gs) D. transpiration (E). Vertical bars indicate the standard deviation of mean values (n = 9). LR, leaf removal; CO, control.

Alatzas, A., Theocharis, S., Miliordos, D.-E., Tsaktsarlis, V., Chronis, I., Kotseridis, Y., Koundouras, S., & Hatzopoulos, P. (2024). Defoliation at berry set alters grape composition and gene expression during berry development in two Greek *Vitis vinifera* L. cultivars. *OENO One*, *58*(2). https://doi.org/10.20870/oeno-one.2024.58.2.7790



SUPPLEMENTARY FIGURE 4. The effect of defoliation on grapevine yield. Total yield per vine (A) and bunch weight (B) are shown. Vertical bars represent the standard deviation of mean values (n = 9) and asterisks indicate statistically significant difference (Student's t-test, p value < 0.05) between control and treated plants.



SUPPLEMENTARY FIGURE 5. Total phenols level and berry size in Assyrtiko. Total phenols concentration expressed in au/berry f.w. (upper panel) and in au/ g berry f.w. (lower panel). Vertical bars indicate the standard deviation of mean values (n = 9). LR, leaf removal; CO, control.

SUPPLEMENTARY DATA
Alatzas, A., Theocharis, S., Miliordos, D.-E., Tsaktsarlis, V., Chronis, I., Kotseridis, Y., Koundouras, S., & Hatzopoulos, P. (2024). Defoliation at berry set alters grape composition and gene expression during berry development in two Greek *Vitis vinifera* L. cultivars. *OENO One*, *58(*2). https://doi.org/10.20870/oeno-one.2024.58.2.7790

SUPPLEMENTARY TABLE S1. List of primers used in RT-qPCR analysis.

Gene Name	Gene ID	NCBI Accession Number	Forward primer	Reverse primer
VviPAL	VIT_13s0019g04460	XM_010660093.2	GTGAGGGAAGAACTGGGAGC	TTGTCACACTCTTCACCGGG
VviC4H	VIT_06s0004g08150	XM_002266202.3	GAACCACCTGAACCTCTCCG	ATCCGAACTCCACTCCCTGA
VviDXS	VIT_05s0020g02130	XM_002277883.4	CCAAGGGCGTTACCAAACAG	TCAACTTTTGCAGCCAATTCA
VviCCD1	VIT_13s0064g00840	NM_001280915	TGGACAGCATAGCCAAGGTG	GCTCACGAGGGACAAAGACA
VviLOXA	VIT_06s0004g01450	NM_001281094.1	GCAAATCAAAGGGACAACGCTGTATGG	TGCTTCCACTGCGGCTTCC
VviEF1a	VIT_06s0004g03240	XM_002284888.3	GAACTGGGTGCTTGATAGGC	AACCAAAATATCCGGAGTAAAAGA

SUPPLEMENTARY TABLE S2. Weather conditions at the two experimental vineyards. Mean temperature (T), Growing Degree Days (GDD, base 10 °C), and total rainfall, recorded from April to September during the two seasons (2019 and 2020).

Vineyard of Assyrtiko (Harvest on 30th Aug 2019 and 2nd Sept 2020)							
	2019				2020		
Month	**T (°C)**	**GDD (°C)**	**Rainfall**		**T (°C)**	**GDD (°C)**	**Rainfall**
April	13,4	102	51,4		12,8	84	92,8
May	18,2	254	24		18,6	267	44,6
June	23,6	408	136,8		21,3	339	63,2
July	24,8	459	67		24,5	450	61,4
August	26,1	499	8,8		24,3	443	49,6
September	22	360	33,2		21,9	357	23,6
Vineyard of Agiorgitiko (Harvest on 17th Sept 2019 and 15th Sept 2020)							
	2019				2020		
Month	**T (°C)**	**GDD (°C)**	**Rainfall**		**T (°C)**	**GDD (°C)**	**Rainfall**
April	13,7	111	68		12,9	87	103,2
May	18,2	254	23		18,4	260	32,2
June	23,8	414	89,4		21,9	357	49
July	25,1	468	44		25,9	493	43,8
August	26,6	515	3		25,8	490	17,6
September	22,2	366	61,8		23,2	396	19,8

SUPPLEMENTARY TABLE S3. Analysis of variance (three-way ANOVA) regarding the effects of cultivar, vintage and treatment (i.e., defoliation) on the measured grape berry quality traits (i.e., berry weight, total soluble solids, titratable acidity, pH and total phenols).

Summary for ASSYRTIKO						
		Berry Weight	**TSS**	**TA**	**pH**	**Phenols**
R^2		0,945	0,560	0,822	0,614	0,437
F		114,012	8,496	30,850	10,586	5,178
Pr > F		< 0,0001	0,001	< 0,0001	0,0002	0,008
VINTAGE	F	15,140	1,833	4,064	13,931	6,843
	Pr>F	**0,001**	0,191	0,057	**0,001**	**0,017**
TREATMENT	F	271,717	23,653	87,610	14,822	8,240
	Pr>F	**< 0,0001**	**< 0,0001**	**< 0,0001**	**0,001**	**0,009**
VINTAGE*TREATMENT	F	55,180	0,003	0,876	3,007	0,451
	Pr>F	**< 0,0001**	0,961	0,360	0,098	0,510
Summary for AGIORGITIKO						
		Berry Weight	**TSS**	**TA**	**pH**	**Phenols**
R^2		0,088	0,671	0,694	0,652	0,154
F		0,644	13,596	15,086	12,470	1,216
Pr > F		0,596	< 0,0001	< 0,0001	< 0,0001	0,330
VINTAGE	F	1,443	1,749	0,062	30,806	0,298
	Pr>F	0,244	0,201	0,806	**< 0,0001**	0,591
TREATMENT	F	0,482	38,991	41,628	3,034	2,679
	Pr>F	0,495	**< 0,0001**	**< 0,0001**	0,097	0,117
VINTAGE*TREATMENT	F	0,006	0,049	3,569	3,570	0,670
	Pr>F	0,939	0,828	0,073	0,073	0,423
Summary for Both Cultivars						
		Berry Weight	**TSS**	**TA**	**pH**	**Phenols**
R^2		0,648	0,684	0,776	0,958	0,962
F		10,528	12,378	19,840	129,910	146,429
Pr > F		< 0,0001	< 0,0001	< 0,0001	< 0,0001	< 0,0001
CULTIVAR	F	9,637	25,946	1,540	836,828	996,396
	Pr>F	**0,003**	**< 0,0001**	0,222	**< 0,0001**	**< 0,0001**
VINTAGE	F	0,000	0,139	1,540	10,788	7,035
	Pr>F	0,992	0,711	0,222	**0,002**	**0,011**
TREATMENT	F	30,988	56,807	124,779	10,788	10,525
	Pr>F	**< 0,0001**	**< 0,0001**	**< 0,0001**	**0,002**	**0,002**
CULTIVAR*VINTAGE	F	5,311	3,473	2,547	44,025	5,298
	Pr>F	**0,026**	0,070	0,118	**< 0,0001**	**0,027**
CULTIVAR*TREATMENT	F	17,984	0,247	4,004	0,029	4,805
	Pr>F	**< 0,0001**	0,622	0,052	0,865	0,034
VINTAGE*TREATMENT	F	4,563	0,007	4,004	6,085	0,139
	Pr>F	**0,039**	0,934	0,052	**0,018**	0,711
CULTIVAR*VINTAGE* TREATMENT	F	5,214	0,027	0,468	0,828	0,808
	Pr>F	**0,028**	0,869	0,498	0,368	0,374