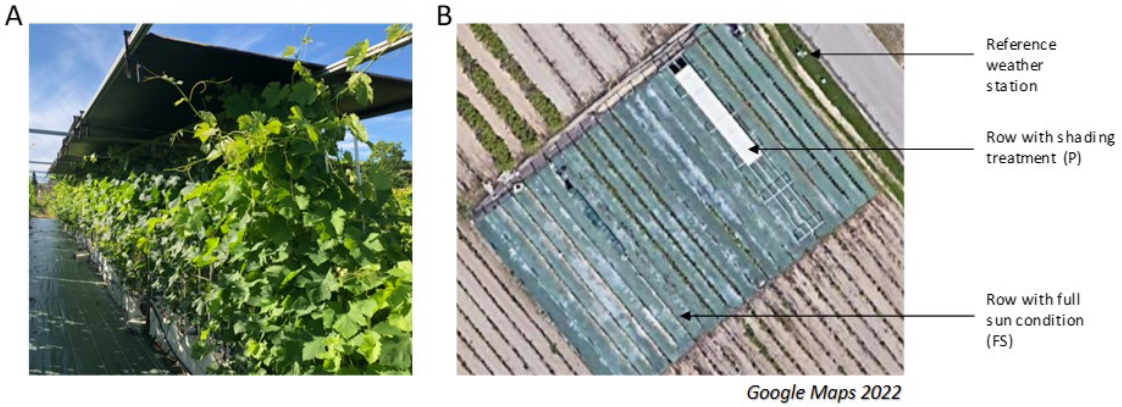
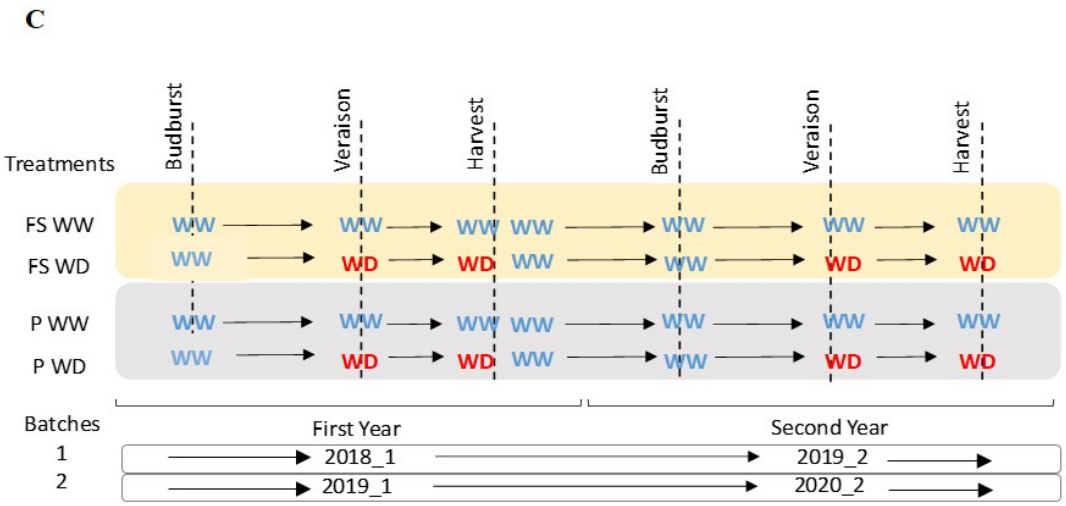
SUPPLEMENTARY DATA
Tiffon-Terrade, B., Simonneau, T., Caffarra, A., Boulord, R., Pechier, P., Saurin, N., Romieu, C., Fumey, D., & Christophe, A. (2023). Delayed grape ripening by intermittent shading to counter global warming depends on carry-over effects and water deficit conditions. *OENO One, 57*(1).
https://doi.org/10.20870/oeno-one.2023.57.1.5521

Supplementary data





The weather station is also indicated. Synoptic representation of the application of the water regimes (WW: well-watered; WD: water deficit) corresponding to the different treatments on the 2 batches of plants (C).

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Supplemental Table 1. Comparison of growing degree days (GDD, °Cd) cumulated from 1st January to flowering or to veraison. for potted Syrah plants submitted to full sun conditions (FS) or shading with panels (P) and either well-watered (WW) or water deficit regime (WD) for one year (2018_1, 2019_1) or two years of treatments (2019_2, 2020_2). 2018_1 and 2019_2 corresponded to a first batch of plants and 2019_1 and 2020_2 to a second batch. GDD was calculated using temperature measured within the canopy in either FS or P conditions and a basis temperature of 10°C.

		01/01 to flowering		01/01 to veraison	
Batch and year	Treatment	GDD (°Cd)	n	GDD (°Cd)	n
2018_1	FS WW	479.63 ± 18.28 b	28	1308.22 ± 42.47 b	18
	FS WD			1281.83 ± 31.22 b	7
	P WW	496.34 ± 19.34 a	26	1395.93 ± 59.63 a	10
	P WD			1374.68 ± 45.97 a	10
2019_1	FS WW	451.18 ± 20.47 b	24	1338.7 ± 21.09 b	7
	FS WD			1334.91 ± 8.68 b	6
	P WW	466.45 ± 16.19 a	15	1549.12 ± 60.98 a	4
	P WD			1392.94 ± 4.68 a	3
2019_2	FS WW	482.11 ± 26.09 ab	8	1317.37 ± 33.37 c	8
	FS WD	458.78 ± 13.45 c	8	1288.45 ± 31.22 c	8
	P WW	488.1 ± 16.5 a	12	1722.14 ± 30.29 a	11
	P WD	460.37 ± 3.94 bc	8	1486.93 ± 58.97 b	7
2020_2	FS WW	539.61 ± 12.24 a	7	1359.07 ± 111.17 b	8
	FS WD	535.78 ± 11.49 a	11	1341.91 ± 78.52 b	12
	P WW	524.66 ± 2.08 ab	6	1643.56 ± 39.72 a	6
	P WD	520.94 ± 4.26 b	6	1551.4 ± 74.64 a	6

		Factor	01/01 to flowering	01/01 to veraison
Anova p - values main factors	All experiments	Shade	**	***
		Irrig	ns	***
		Year	***	***
		Rep	***	***
Anova p - values interactions	All experiments	Shade:Irrig	ns	***
		Shade:Year	*	***
		Irrig:Year	ns	**
		Shade:Rep	*	***
		Irrig:Rep	-	*
	Batch and year			
Anova p - values per batch and year	2018_1	Shade	**	***
		Irrig	-	ns
		Shade:Irrig	-	ns
	2019_1	Shade	**	***
		Irrig	-	***
		Shade:Irrig	-	***
	2019_2	Shade	ns	***
		Irrig	***	***
		Shade:Irrig	ns	***
	2020_2	Shade	***	***
		Irrig	ns	ns
		Shade:Irrig	ns	ns

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*Means are compared for each batch of plants and year of treatment with Kruskal-wallis test and Bonferroni correction. Same letters indicate that no significant difference was detected (p-value > 0.05). Four-way Anova was run with the following factors: Shade for the light condition (FS or P), Irrig for the watering regime (WW or WD), Year for the experimental year (2018 to 2020), Rep for first (_1) or second year of treatment (_2). Shade, Irrig and the interaction Shade:Irrig was also tested with two-way Anova for each batch of plants and year of treatment. Results of Anova are indicated as follows: *; p < 0.05, **; p < 0.01, ***; p < 0.001, ns: not significant.*

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Supplemental Table 2. Growing degree days (GDD, °Cd) cumulated from veraison to harvest.

			Veraison to harvest	
Batch and year	Treatment	Harvest	GDD (°Cd)	n
2018_1	FS WW	17/08/2018	398.4 ± 46.4 b	16
	FS WD	17/08/2018	419.3 ± 30.4 ab	8
	P WW	28/08/2018	467.4 ± 123.8 ab	10
	P WD	24/08/2018	470.7 ± 58 a	11
2019_1	FS WW	28/08/2019	471 ± 7.1	4
	FS WD	28/08/2019	481 ± 7.4	4
	P WW	11/09/2019	454.1 ± 79.6	3
	P WD	03/09/2019	525 ± 0	3
2019_2	FS WW	30/08/2019	531.6 ± 34 b	8
	FS WD	05/09/2019	620 ± 27 a	8
	P WW	17/09/2019	255.3 ± 71.5 c	3
	P WD	11/09/2019	532.2 ± 65.6 b	6
2020_2	FS WW	27/08/2020	605.1 ± 91.6 bc	7
	FS WD	25/09/2020	923.6 ± 78.1 a	12
	P WW	25/09/2020	491.8 ± 100.6 c	5
	P WD	25/09/2020	697.3 ± 90.2 b	5

			Veraison to harvest
		Factor	
Anova p - values main factors	All experiments	Shade	***
		Irrig	***
		Year	***
		Rep	***
Anova p - values interactions	All experiments	Shade:Irrig	ns
		Shade:Year	***
		Irrig:Year	***
		Shade:Rep	***
		Irrig:Rep	***
	Batch and year		
Anova p - values per batch and year	2018_1	Shade	**
		Irrig	ns
		Shade:Irrig	ns
	2019_1	Shade	ns
		Irrig	0.09
		Shade:Irrig	ns
	2019_2	Shade	***
		Irrig	***
		Shade:Irrig	***
	2020_2	Shade	***
		Irrig	***
		Shade:Irrig	ns

Same legend as supplemental Table 1 for statistics.