

## **Supplementary Information**

### **Assessment of the crop forcing technique and irrigation strategy on the ripening of Tempranillo grapes in a semi-arid climate.**

Nieves Lavado<sup>a,b</sup>, David Uriarte<sup>a</sup>, Luis A. Mancha<sup>a</sup>, Daniel Moreno<sup>b</sup> M. Esperanza Valdés<sup>b</sup> y M. Henar Prieto<sup>a</sup>.

<sup>a</sup>CICYTEX (Junta de Extremadura), Finca La Orden, Guadajira, Badajoz, Spain

<sup>b</sup>CICYTEX (Junta de Extremadura), Instituto Tecnológico Agroalimentario de Extremadura, Badajoz, Spain

**Table S1.** Coefficient of determination ( $R^2$ ) and equation between x=Total Soluble Solids (TSS) and y= pH; Titratable Acidity (TA); Malic Acid (MAL); Tartaric Acid (TAR); Total Polyphenols (TPP) and Total Anthocyanins (TAN), in year 2017, 2018 and 2019.

Treatment	2017				2018				2019			
	Equation	Slope <sup>a</sup>	$R^2$	Equation	Slope <sup>a</sup>	$R^2$	Equation	Slope <sup>a</sup>	$R^2$			
<b>pH</b>	<b>C-NF</b>	$y = 0.0944x + 1.552$	bc	$R^2 = 0.8252$	$y = 0.0692x + 1.9309$	d	$R^2 = 0.8674$	$y = 0.0875x + 1.5930$	a	$R^2 = 0.8885$		
	<b>RI-NF</b>	$y = 0.1001x + 1.4088$	b	$R^2 = 0.8432$	$y = 0.0939x + 1.6260$	c	$R^2 = 0.8284$	$y = 0.0771x + 1.9269$	b	$R^2 = 0.7257$		
	<b>RI-F1</b>	$y = 0.0909x + 1.6236$	c	$R^2 = 0.6995$	$y = 0.1061x + 1.2605$	b	$R^2 = 0.9409$	$y = 0.0816x + 1.6751$	ab	$R^2 = 0.9439$		
	<b>RI-F2</b>	$y = 0.1237x + 0.7748$	a	$R^2 = 0.7143$	$y = 0.1262x + 0.7096$	a	$R^2 = 0.8258$	$y = 0.0571x + 2.1008$	c	$R^2 = 0.904$		
<b>TA</b>	<b>C-NF</b>	$y = -1.1546x + 32.107$	b	$R^2 = 0.8917$	$y = -1.3285x + 35.061$	a	$R^2 = 0.8745$	$y = -1.0817x + 27.444$	a	$R^2 = 0.8048$		
	<b>RI-NF</b>	$y = -1.0622x + 29.257$	c	$R^2 = 0.8643$	$y = -0.6638x + 20.107$	c	$R^2 = 0.7199$	$y = -0.8767x + 24.042$	c	$R^2 = 0.8233$		
	<b>RI-F1</b>	$y = -0.8937x + 25.989$	d	$R^2 = 0.6768$	$y = -1.1065x + 30.534$	b	$R^2 = 0.8639$	$y = -0.9534x + 27.496$	b	$R^2 = 0.9024$		
	<b>RI-F2</b>	$y = -1.2539x + 33.881$	a	$R^2 = 0.7079$	$y = -1.3285x + 35.432$	a	$R^2 = 0.8245$	$y = -0.8464x + 25.411$	c	$R^2 = 0.8613$		
<b>MAL</b>	<b>C-NF</b>	$y = -0.7525x + 20.043$	a	$R^2 = 0.8729$	$y = -1.0193x + 25.71$	a	$R^2 = 0.8909$	$y = -0.7485x + 17.72$	a	$R^2 = 0.8927$		
	<b>RI-NF</b>	$y = -0.5372x + 13.757$	b	$R^2 = 0.7877$	$y = -0.3475x + 10.818$	c	$R^2 = 0.4712$	$y = -0.5324x + 14.308$	bc	$R^2 = 0.8204$		
	<b>RI-F1</b>	$y = -0.3503x + 10.702$	c	$R^2 = 0.7091$	$y = -0.4826x + 13.482$	b	$R^2 = 0.6438$	$y = -0.5604x + 16.196$	b	$R^2 = 0.9186$		
	<b>RI-F2</b>	$y = -0.5406x + 15.206$	b	$R^2 = 0.7122$	$y = -0.5579x + 15.536$	b	$R^2 = 0.6153$	$y = -0.5107x + 14.857$	c	$R^2 = 0.9033$		
<b>TAR</b>	<b>C-NF</b>	$y = -0.0853x + 7.4104$	b	$R^2 = 0.2917$	$y = -0.0675x + 6.5076$	c	$R^2 = 0.4773$	$y = -0.0919x + 6.9316$	a	$R^2 = 0.4835$		
	<b>RI-NF</b>	$y = -0.1933x + 9.9613$	a	$R^2 = 0.696$	$y = 0.053x + 4.0839$	-	$R^2 = 0.1219$	$y = -0.0925x + 7.3254$	a	$R^2 = 0.452$		
	<b>RI-F1</b>	$y = -0.0880x + 6.6360$	-	$R^2 = 0.1888$	$y = -0.0992x + 7.1437$	b	$R^2 = 0.2355$	$y = -0.0804x + 7.1108$	b	$R^2 = 0.6687$		
	<b>RI-F2</b>	$y = -0.1146x + 7.2372$	b	$R^2 = 0.3102$	$y = -0.193x + 8.7879$	a	$R^2 = 0.426$	$y = -0.0993x + 7.6049$	a	$R^2 = 0.7237$		
<b>TPP</b>	<b>C-NF</b>	$y = -0.2889x + 11.891$	c	$R^2 = 0.5109$	$y = -0.3049x + 12.000$	b	$R^2 = 0.4868$	$y = -0.2697x + 10.172$	b	$R^2 = 0.5058$		
	<b>RI-NF</b>	$y = -0.3593x + 13.975$	b	$R^2 = 0.5387$	$y = -0.0095x + 5.0595$	-	$R^2 = 0.0006$	$y = -0.4824x + 15.273$	a	$R^2 = 0.7771$		
	<b>RI-F1</b>	$y = -0.6655x + 21.276$	a	$R^2 = 0.729$	$y = -0.4101x + 16.196$	b	$R^2 = 0.2508$	$y = -0.2761x + 12.141$	b	$R^2 = 0.3228$		
	<b>RI-F2</b>	$y = -0.6569x + 21.474$	a	$R^2 = 0.5457$	$y = -0.565x + 19.097$	a	$R^2 = 0.5623$	$y = -0.3041x + 13.257$	b	$R^2 = 0.5401$		
<b>TAN</b>	<b>C-NF</b>	$y = 0.0783x - 0.8179$	c	$R^2 = 0.7069$	$y = 0.078x - 0.7698$	c	$R^2 = 0.9009$	$y = 0.0695x - 0.6885$	b	$R^2 = 0.6641$		
	<b>RI-NF</b>	$y = 0.1190x - 1.4075$	b	$R^2 = 0.7901$	$y = 0.0877x - 0.8398$	c	$R^2 = 0.6019$	$y = 0.0717x - 0.6764$	b	$R^2 = 0.4872$		
	<b>RI-F1</b>	$y = 0.1426x - 2.0128$	ab	$R^2 = 0.7432$	$y = 0.1077x - 1.1079$	b	$R^2 = 0.7257$	$y = 0.1224x - 1.6916$	a	$R^2 = 0.9389$		
	<b>RI-F2</b>	$y = 0.1831x - 2.7493$	a	$R^2 = 0.5142$	$y = 0.1971x - 2.8476$	a	$R^2 = 0.5936$	$y = 0.1168x - 1.3280$	b	$R^2 = 0.8426$		

<sup>a</sup>. Comparison of slopes was tested by performing the corresponding analysis of variance (ANOVA), in all cases  $p < 0.001$ . Different letters indicate the existence of statistically significant differences between treatments.

a)



b)



c)



Photographs of vines of treatments (a) C, (b) F1 and (c) F2 on 11th August 2017.