

Supplemental Material

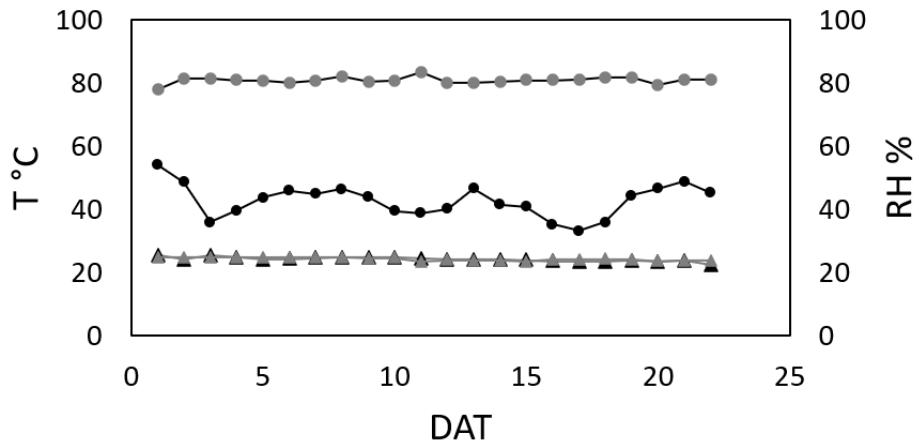


Figure S1: Climatic data of temperature (triangles) and relative humidity (circles) under low (grey circles and triangles) and high (black circles and triangles) VPDs. Data are daily means of T and RH measurements taken every 15 minutes.

Table S1: Effect of VPD and cultivar on Salanova Stomatal frequency (SF) and Stomatal size (SS)

Source of variance	SF (n mm ⁻²)	SS (μm)
VPD		
L	89.86 ± 4.21 a	164.10 ± 5.44 b
H	68.04 ± 3.09 b	200.58 ± 3.30 a
Cultivar (C)		
G	75.10 ± 3.74 a	193.84 ± 4.81 a
R	82.80 ± 3.56 b	170.84 ± 4.91 b
Significance		
VPD	***	***
Cultivar	*	***
VPD x C	*	*

Table S2: Effect of VPD and cultivar on hydraulic related traits: gravimetric transpiration (gTr), gravimetric water use efficiency (gWUE), cumulative water transpired (CWT), net assimilation rate (NAR), leaf area duration (LAD), mean transpiration rate (MTR)

Source of variance	gTr (g)	gWUE (g mL ⁻¹)	CWT (mL)	NAR (g cm ² day ⁻¹)	LAD (cm ² day)	MTR (mL cm ⁻² day ⁻¹)
VPD						
L	38.19 ± 2.44 b	4.4 e ⁻³ ± 4.3 e ⁻⁵ a	1030 ± 22.78 b	1.6 e ⁻³ ± 2.1 e ⁻⁵ b	2954 ± 45.78 a	0.35 ± 5.5e ⁻³ b
H	57.31 ± 2.59 a	1.6 e ⁻³ ± 1.5 e ⁻⁵ b	1380 ± 10.37 a	8 e ⁻⁴ ± 7.5 e ⁻⁶ a	2669 ± 25.03 b	0.52 ± 5.3e ⁻³ a
Cultivar (C)						
G	46.04 ± 2.64 a	3.2 e ⁻³ ± 1.2 e ⁻⁵ a	1165 ± 17.25 b	1.2 e ⁻³ ± 4.8 e ⁻⁵ a	2709 ± 32.64 b	0.44 ± 1.4 e ⁻³ a
R	49.96 ± 2.91 a	2.8 e ⁻³ ± 1.5 e ⁻⁵ b	1245 ± 27.72 a	1.2 e ⁻³ ± 5.1 e ⁻⁵ a	2914 ± 44.45 a	0.43 ± 1.7 e ⁻³ a
Significance						
VPD	***	***	***	***	**	***
Cultivar	NS	***	***	NS	*	NS
VPD x C	*	***	***	NS	NS	**

Table S3: Effect of VPD and cultivar on crop physiology: quantum yield of PSII (Φ_{PSII}), non photochemical quenching (NPQ), electron transport rate (ETR), instantaneous net-photosynthesis (iPn), instantaneous stomatal conductance (igs), instantaneous water use efficiency (iWUE), instantaneous transpiration (iTr).

Source of variance	Φ_{PSII}	NPQ	ETR	iP ($\mu\text{mol CO}_2 \text{ m}^{-2}\text{s}^{-1}$)	igs ($\text{mmol H}_2\text{O m}^{-2}\text{s}^{-1}$)	iWUE (iPn/iTr)	iTr ($\text{mmol H}_2\text{O m}^{-2}\text{s}^{-1}$)
VPD							
L	0.70 ± 0.03 a	1.13 ± 0.05 b	50.57 ± 1.58 a	7.60 ± 0.17 a	0.19 ± 0.17 a	4.80 ± 0.20 a	1.64 ± 0.04 b
H	0.68 ± 0.04 b	1.23 ± 0.03 a	44.50 ± 1.82 b	6.21 ± 0.09 b	0.07 ± 0.01 b	3.21 ± 0.11 b	2.07 ± 0.06 a
Cultivar (C)							
G	0.68 ± 0.04 b	1.33 ± 0.03 a	50.82 ± 2.38 a	6.66 ± 0.19 b	0.13 ± 0.07 a	3.99 ± 0.25 a	1.87 ± 0.07 a
R	0.70 ± 0.04 a	1.04 ± 0.04 b	44.45 ± 1.56 b	7.15 ± 0.13 a	0.14 ± 0.08 a	4.06 ± 0.13 a	1.83 ± 0.05 a
Significance							
VPD	**	*	*	**	***	**	**
Cultivar	***	***	*	*	NS	NS	NS
VPD x C	*	***	*	*	NS	NS	NS