

## Supplementary material

**Table S1.** Primers sequences and melting temperature (Tm) for qRT-PCR analysis

GENE	PRIMER PAIR	SEQUENCE (5'→3')	Tm (°C)
<i>APX</i>	Forward primer	ACTCATCCGGAAAGAGAGAGC	63.7
	Reverse primer	CTGAAGAGGCTTATCCGGGC	67.0
<i>MDHAR</i>	Forward primer	GCTTCTGTTGAGGAAGCCCT	64.7
	Reverse primer	GCACATCCTGACCTCTCTCG	65.1
<i>GR</i>	Forward primer	GCAATAGAGTGGAGTCAGGTGG	64.8
	Reverse primer	AACGTCTCCAAGTCCCAAA	66.7
<i>SOD</i>	Forward primer	ATCCATGCAACCAGGAGGTG	67.2
	Reverse primer	AAAACAAGCCAAACCCAGCC	67.1
<i>CAT</i>	Forward primer	AGCTTCCTGCAAATGCTCCT	65.2
	Reverse primer	GAGCAGGGTCGTGTCTTGAA	65.5
<i>DHAR</i>	Forward primer	CTGGATGGGCACCAAAGTT	65.8
	Reverse primer	GACCCAATAGCATCACAACCA	65.6
<i>EF1α</i>	Forward primer	TCTTGGTAGACGCCTTACG	65.3
	Reverse primer	AGGAAGCGGTGCATTGTTG	65.0

**Table S2.** Statistical significance (P) of stress (S), treatment (T), and S x T interaction on chlorophyll a fluorescence parameters.

Parameter	P					
	3/07			12/07		
	Stress (S)	Treatment (T)	Interaction (SxT)	Stress (S)	Treatment (T)	Interaction (SxT)
Fluorescence emitted when all reaction centres (RCs) are open ( <b>F<sub>o</sub></b> )	0.0815	0.6681	0.5853	0.1200	0.0469*	0.3461
Maximum fluorescence emitted when all RCs are closed ( <b>F<sub>m</sub></b> )	0.0103*	0.7780	0.9909	0.4354	0.3280	0.8177
Maximum variable fluorescence ( <b>F<sub>v</sub></b> )	0.0038* *	0.7217	0.9566	0.6117	0.5347	0.9773
Maximum quantum yield of primary photochemistry ( <b>F<sub>v</sub>/F<sub>m</sub></b> )	<0.0001 ****	0.4204	0.5634	0.1501	0.0759	0.2939
Time to reach F <sub>m</sub> ( <b>T<sub>fm</sub></b> )	<0.0001 ****	0.4525	0.6630	0.3716	0.0605	0.7106
Total complementary area between fluorescence induction curve and F = F <sub>m</sub> ( <b>Area</b> )	0.1230	0.5975	0.8904	0.3116	0.7531	0.2194
Reaction centres per adsorption of light energy ( <b>RC/ABS</b> )	0.0416*	0.6857	0.8523	0.9561	0.7971	0.7526
Conformation term for the primary photochemistry ( <b>F<sub>v</sub>/F<sub>o</sub></b> )	<0.0001 ****	0.4525	0.6630	0.1011	0.0568	0.2568
Performance index ( <b>PI</b> )	0.0063* *	0.8170	0.7383	0.6709	0.4007	0.6464
Fluorescence of all open RCs/ Fluorescence of all closed RCs ( <b>F<sub>o</sub>/F<sub>m</sub></b> )	<0.0001 ****	0.4427	0.5902	0.1122	0.0480*	0.2402
Normalized value of the initial slope of the fluorescence induction curve ( <b>M<sub>0</sub></b> )	0.0542	0.7883	0.7946	0.8483	0.5759	0.5789

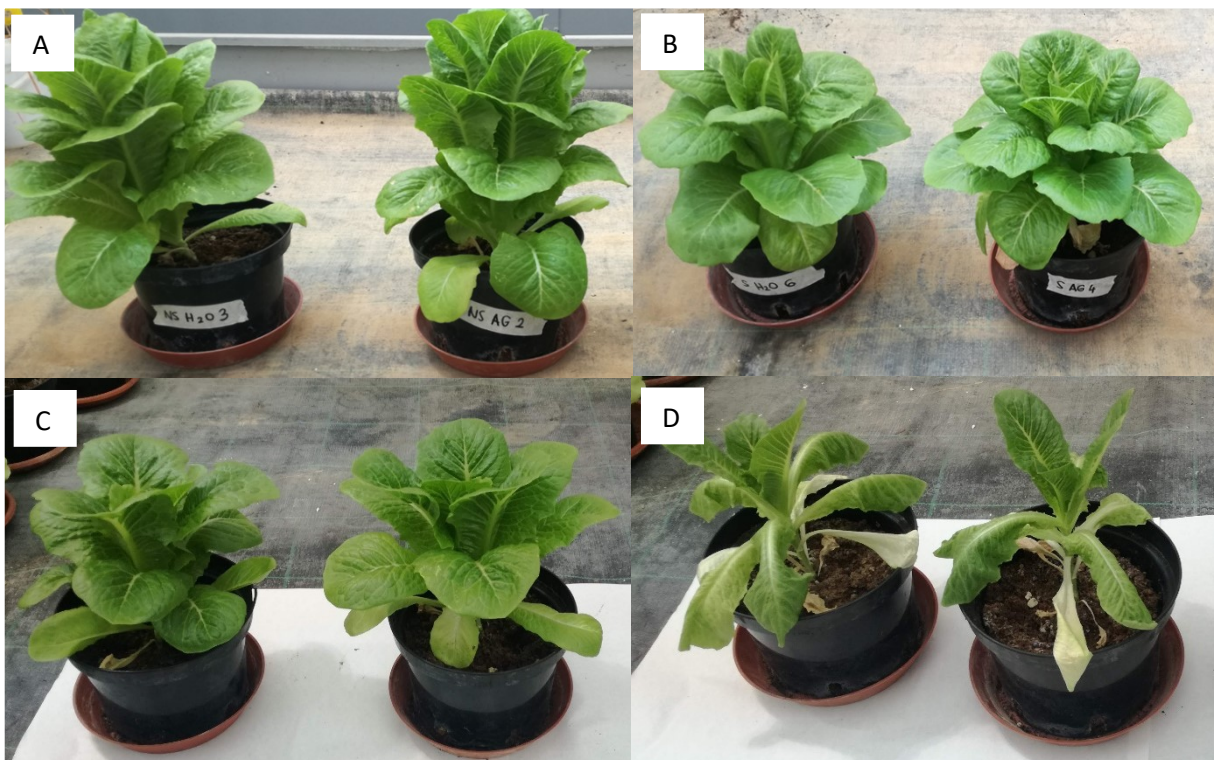
Normalized Area by Fv (it gives a measure of the energy needed to close all reaction centres) ( <b>Sm</b> )	0.4936	0.3652	0.8777	0.0246*	0.8623	0.0424*
Normalized Area per single turn-over ( <b>Ss</b> )	0.0896	0.6130	0.9331	0.2496	0.7929	0.4881
Absorption flux per RC (at t = 0) ( <b>ABS/RC</b> )	0.0498*	0.7243	0.9407	0.1906	0.9980	0.5733
Trapped energy flux per RC (at t = 0) ( <b>TR<sub>0</sub>/RC</b> )	0.0810	0.6533	0.9725	0.3077	0.7506	0.4611
Electron transport flux per RC (at t = 0) ( <b>ET<sub>0</sub>/RC</b> )	0.3078	0.3879	0.5714	0.0651	0.9399	0.4250
Dissipated energy flux per RC (at t = 0) ( <b>DI<sub>0</sub>/RC</b> )	0.0077* *	0.9898	0.8261	0.0319*	0.1337	0.6145
Absorption flux per cross section (CS), approximated by Fo ( <b>ABS/CS</b> )	0.0815	0.6681	0.5853	0.1200	0.0469*	0.3461
RCs' concentration (or density) per excited CS ( <b>RC/CS</b> )	0.1534	0.6642	0.9820	0.3026	0.1104	0.4403
Trapped energy flux per CS (at t = 0) ( <b>TR<sub>0</sub>/CS</b> )	0.2559	0.7745	0.8461	0.0382*	0.0629	0.5031
Electron transport flux per CS (at t = 0) ( <b>ET<sub>0</sub>/CS</b> )	0.1331	0.7874	0.7438	0.0239*	0.0776	0.5842
Dissipated energy flux per CS (at t = 0) ( <b>DI<sub>0</sub>/CS</b> )	0.0509	0.4095	0.8542	0.0517	0.0353*	0.3240
RCs' concentration per excited CS (Fo) ( <b>RC/CS<sub>0</sub></b> )	0.1534	0.6642	0.9820	0.3026	0.1104	0.4403
RCs' concentration per excited CS (Fm) ( <b>RC/CS<sub>m</sub></b> )	0.0224*	0.8030	0.8911	0.6902	0.4458	0.7657

**Table S3.** Statistical significance (P) of stress (S), treatment (T), and S x T interaction on physiological parameters measured in lettuce plants during or at the end of the growing cycle.

Parameter	P					
	3/07			12/07		
	Stress (S)	Treatment (T)	Interaction (SxT)	Stress (S)	Treatment (T)	Interaction (SxT)
Yield (g m <sup>-2</sup> )	-	-	-	<0.0001 ****	0.9835	0.3821
Dry matter (%)	-	-	-	0.0023**	0.3391	0.7315
Water use efficiency (WUE)	-	-	-	0.0028**	0.9079	0.4195
Chlorophyll (r.u.)	0.0590	0.2581	0.4806	0.6511	0.5514	0.9237
Φ <sub>PSII</sub>	-	-	-	0.0475*	0.6783	0.6130
ETR	-	-	-	0.4304	0.1813	0.0415*
Fs	-	-	-	0.0004 ***	0.5871	0.0619
Nitrate [mg kg <sup>-1</sup> FW]	0.0004 ***	0.0716	0.2914	-	-	-

Proline ( $\mu\text{g g}^{-1}$ )	0.0006 ***	0.8973	0.9295	-	-	-
Osmolytes ( $\text{mOsm kg}^{-1} \text{g}^{-1}$ )	<0.0001 ****	0.6970	0.9606	-	-	-

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**Figure S1.** Lettuce plants during the water stress (3/07) (A: NO STRESS, B: STRESS) and at the end of the growing cycle after the re-watering (12/07) (C: NO STRESS, D: STRESS).