Table S1 Composition of the Hoagland's stock solution used as control treatment in greenhouse pot trial with tomato plants.

Nutrient Concentration	Quantity diluted 10 L/H_2O
KCl – 5 ml/L H_2O - 1M	50 ml
$Ca(NO_3)_2$ – 5 ml/L H_2O - 1M	50 ml
KNO_3 – 5 ml/L H_2O - 1M	50 ml
$MgSO_4$ – 2 ml/L H_2O - 1M	20 ml
Micro-nutrients – 1 ml/L H_2O - 0.1M	10 ml
KH_2PO_4 – 1 ml/L H_2O - 1M	10 ml
Fe chelate – 1 ml/L H_2O - 0.1M	10 ml

Each nutrient is stocked in a separate drum at the indicated dilution in water and molar concentration (left column). The concentrated nutrients were diluted (right column) and 400 ml of the solution was poured into each control replicate pot twice a week. Micro-nutrients were Boric acid, Manganese chloride, Zinc sulphate, Copper sulphate, and Sodium molybdate.

Table S2 Two-way Anova with repeated measure of weekly tomato plant growth parameters.

	Height	Branches	CSA
Tr	df=7; F=14.7; P<.0001	df=7; F=21.8; P<.0001	df=7; F=13.4; P<.0001
St	df=2; F=2609; P<.0001	df=2; F=575; P<.0001	df=2.7; F=1157; P<.0001
Tr*St	df=12; F=20; P<.0001	df=13; F=17.2; P<.0001	df=18.8; F=9.65; P<.0001

Tr: treatments; St: sampling time; df: degrees of freedom.

Table S3 Permanova analysis of proportion of leaf nutrient content for UWP treatments (T1-T7) and the Hoagland's control.

Source	df	MS	Pseudo-F	P-value	Unique perms
Tr	7	352	59.2	**0.001**	998
Res	16	5.95			
Total	23				

Analysis uses Fixed effect with Type III sum of square (partial) 999 permutation of data residual to determine significance. Significant difference (P<0.05) is indicated in bold.

Table S4 Two-way Anova with repeated measure of weekly tomato plant measurement of flower and fruit production.

	Flowers	Fruits
Tr	df=7; F=27.1; P<.0001	df=7; F=47.0; P<.0001
St	df=2; F=114; P<.0001	df=2; F=49.3; P<.0001
Tr*St	df=12.6; F=17.0; P<.0001	df=15; F=10.7; P<.0001

Tr: treatments; St: sampling time; df: degrees of freedom.

Table S5 Average fruits dry matter content (%), fruits loculi number and fruit pericarp thickness of tomato plants in greenhouse pot trial under UWP treatments (T1 – T7) and Hoagland's control (T8).

	DMC (%)	Loculi (n°)	Pericarp (mm)
T1	7.25 ± 0.200	7.00 ± 1.80	4.64 ± 1.35ab
T2	7.27 ± 0.700	7.30 ± 1.50	4.88 ± 0.740a

T3	6.94 ± 1.10	6.20 ± 1.80	4.75 ± 0.930ab
T4	6.76 ± 0.900	7.80 ± 1.50	4.00 ± 0.910bc
T5	6.94 ± 0.600	7.60 ± 2.60	3.60 ± 0.780c
T6	6.90 ± 0.600	8.00 ± 2.50	4.00 ± 0.940bc
T7	6.65 ± 0.800	8.00 ± 2.60	5.00 ± 0.780cd
T8	6.54 ± 0.300	7.90 ± 2.00	5.75 ± 0.350d
P-Value	ns	ns	<0.01

For each parameter measured (column) different letters show significant differences ($p<0.05$) among means by post hoc Tukey HSD Test. Treatments represent increasing UWP supplement rates (T1 = 0.3%; T2 = 0.5%; T3 = 0.8%; T4 = 1%; T5 = 2%; T6 = 3%; T7 = 5%), and Hoagland's solution (T8). Measurements values represent the average of ten replicates (n = 10) per treatment ± standard error.

Table S6 Permanova analysis of proportion of fruit nutrient content for UWP treatments (T1-T7) and Hoagland control (T8).

Source	df	MS	Pseudo-F	P-value	Unique perms
Tr	7	1077	373	**0.001**	999
Res	16	2.89			
Total	23				

Analysis uses Fixed effect with Type III sum of square (partial) 999 permutation of data residual to determine significance. Significant difference ($P<0.05$) is indicated in bold.

Table S7 Permanova analysis of fruit ripeness parameters (colour coordinates and firmness) and quality attributes (pH, TA and SSC) for UWP and treatments (T1-T7) and Hoagland control (T8).

A colour: firmness

Source	df	MS	Pseudo-F	P-value	Unique perms
Tr	7	392	1.51	**0.108**	998
Res	72	259			
Total	79				

B pH: TA: SSC

Source	df	MS	Pseudo-F	P-value	Unique perms
Tr	7	4.76	10.7	**0.001**	998
Res	37	0.443			
Total	44				

Analysis uses Fixed effect with Type III sum of square (partial) 999 permutation of data residual to determine significance. Significant difference ($P<0.05$) is indicated in bold.

Figure S1 On the left tomato plant treatments randomly arranged on benches inside the greenhouse (left to right T6, T8, T6, T2, T4). On the right close up of leaf purpling.