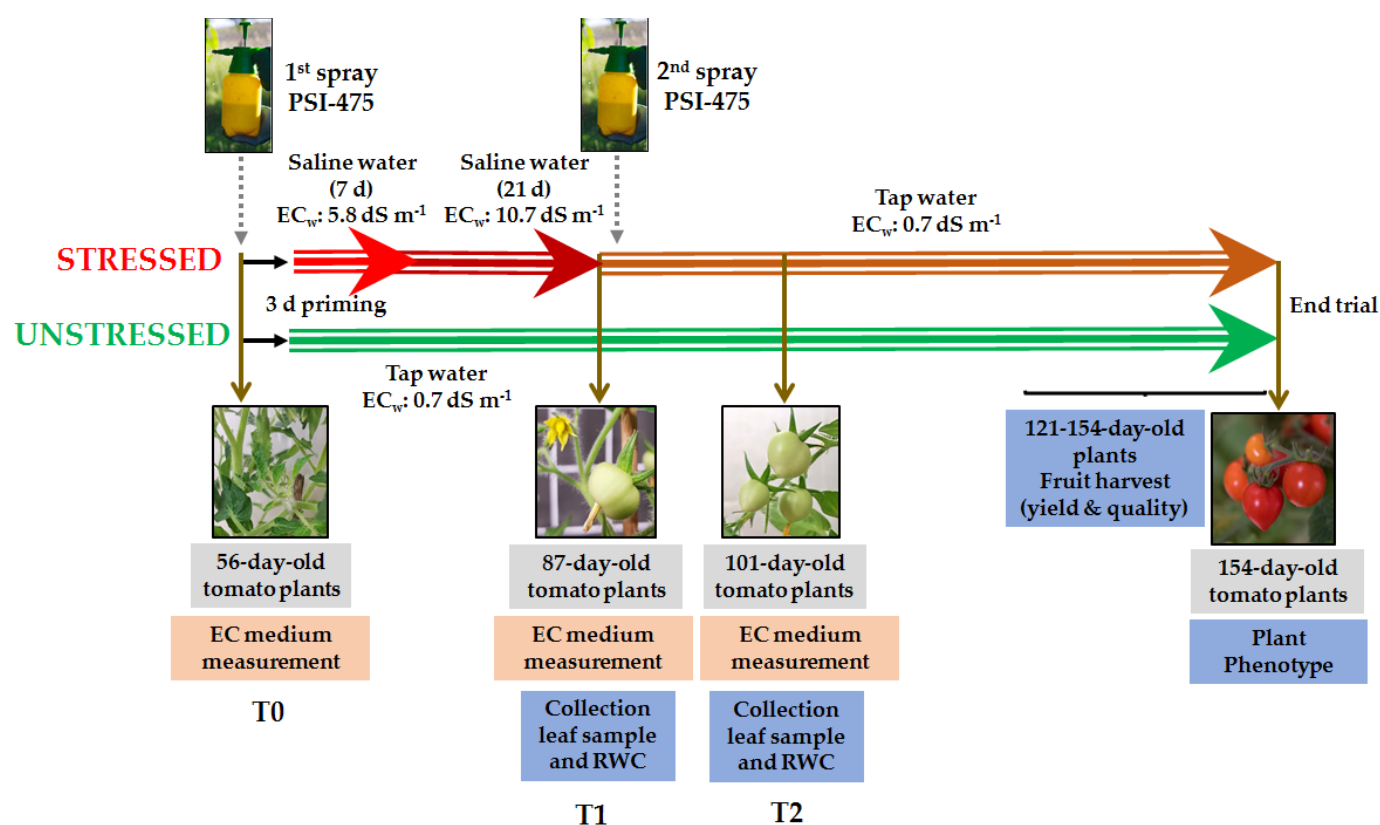
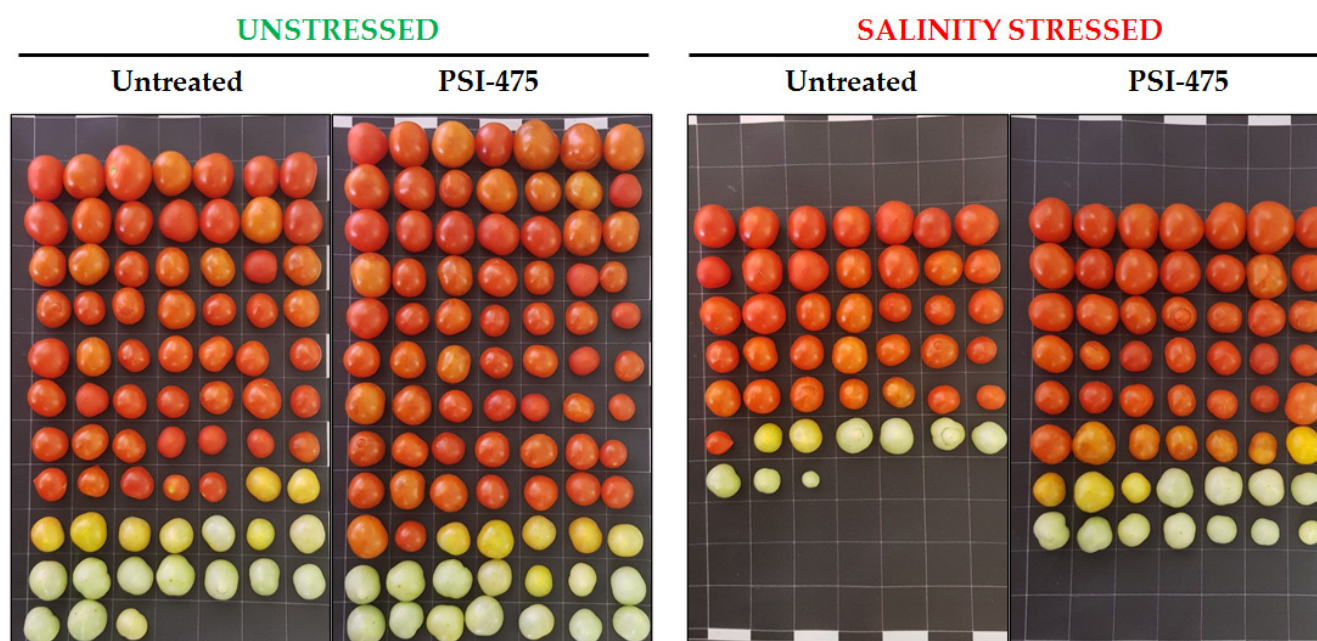


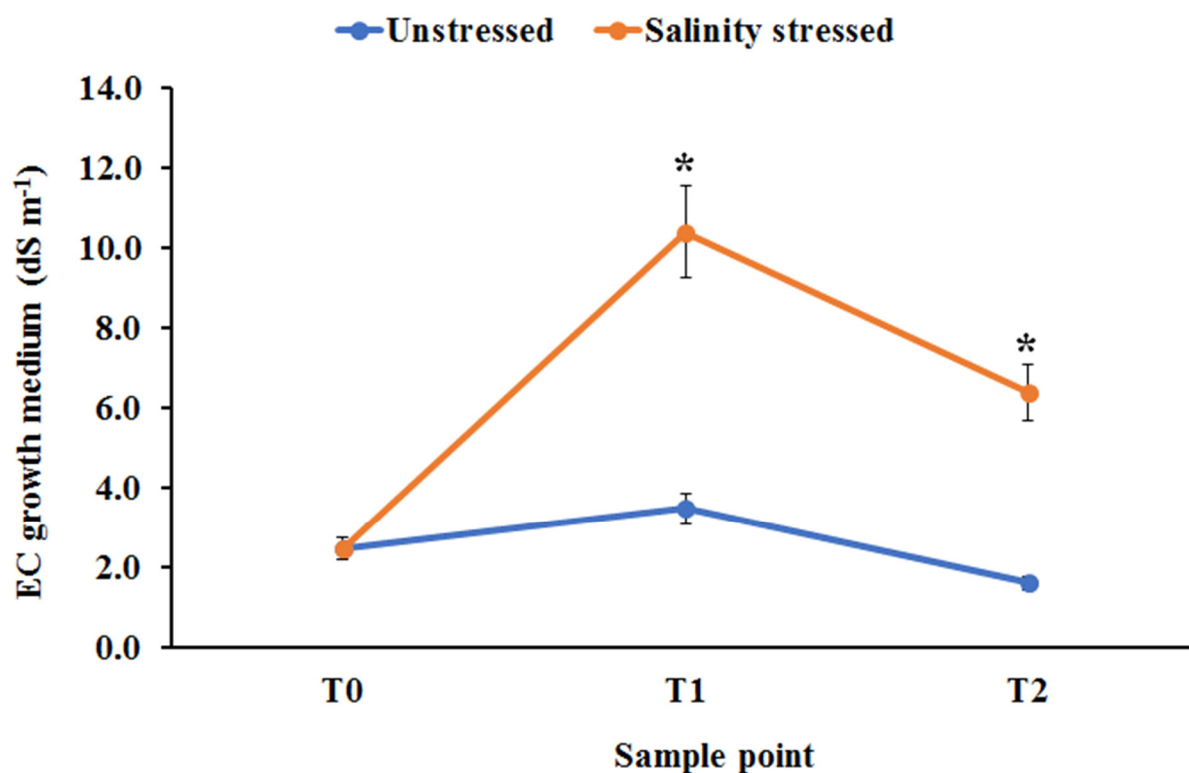
**Figure S1.** High-throughput *Arabidopsis thaliana* root microphenotyping system used to determine the effect of salinity stress and PSI-475. Once *Arabidopsis* seeds germinated on the solid medium, seedlings were subjected to unstressed and salinity stressed conditions by the selective addition of NaCl to the liquid nutrient medium (0 and 300 mM NaCl, respectively). Five concentrations of the PSI-475 (0, 2.5, 5, 10 and 25  $\mu\text{g mL}^{-1}$ ) were applied as biostimulant treatment. Distilled water was applied as an untreated control. This system minimizes saline shock or plant overstimulation by PSI-475 because molecules diffuse through the gel to be absorbed by the growing roots. After 7 days, two important parameters related to salinity stress tolerance are measured (root system architecture and photosynthetic pigments content)



**Figure S2.** Graphical representation of tomato plant trials using a 1 month-saline irrigation water program to evaluate the bioactivity of PSI-475. Sample points are indicated as T0, T1, T2, fruit harvest stage, and end trial.



**Figure S3.** Effect of salinity stress and PSI-475 on tomato fruit number and yield. Fruits shown in the pictures were harvested from a representative sample of 6 plants per treatment and condition.



**Figure S4.** Determination of growth medium EC on tomato trials under unstressed and salinity stressed conditions. T0 (before starting saline irrigation program); T1 (28 days saline irrigation program); T2 (14 days after finishing saline irrigation program and starting irrigation with tap water). \* means statistically significant differences at  $p \leq 0.05$  within the same sample point according to t-test.