

Plant biomass and fruit quality response of greenhouse tomato under varying irrigation level and water quality

Jeet B. Chand*, Guna Hewa, Ali Hassanli, Baden Myers

Supplementary Table 1. Output of the two-way ANOVA for FFW and PBC under three water qualities (W), four irrigation scenarios (I) and their interactions (W × I).

| Particular | Year | Source | Df | SS | MS | F | P |
|------------|-----------|--------|----|---------|--------|---------|------|
| FFW | 2017-2018 | W | 2 | 41.01 | 20.50 | 40.07 | 0.00 |
| | | I | 3 | 2801.58 | 933.86 | 1825.13 | 0.00 |
| | | W × I | 6 | 72.11 | 12.02 | 23.49 | 0.00 |
| | 2018-2019 | W | 2 | 12.44 | 6.22 | 17.62 | 0.00 |
| | | I | 3 | 2277.75 | 759.25 | 2150.51 | 0.00 |
| | | W × I | 6 | 53.11 | 8.85 | 25.07 | 0.00 |
| PBC | 2017-2018 | W | 2 | 0.12 | 0.06 | 3.52 | 0.04 |
| | | I | 3 | 10.34 | 3.45 | 202.13 | 0.00 |
| | | W × I | 6 | 0.08 | 0.01 | 0.82 | 0.57 |
| | 2018-2019 | W | 2 | 0.09 | 0.05 | 3.45 | 0.04 |
| | | I | 3 | 11.98 | 3.99 | 299.32 | 0.00 |
| | | W × I | 6 | 0.10 | 0.02 | 1.22 | 0.33 |

Note: Df= Degree of freedom; SS= Sum of squares; MS= Mean square; F= F-value; P= P-value

Supplementary Table 2. Output of the two-way ANOVA for TSS under three water qualities (W), four irrigation scenarios (I) and their interactions (W × I)

| Particular | Year | Source | Df | SS | MS | F | P |
|----------------------------|-----------|--------|----|------|------|--------|------|
| Total soluble solid | 2017-2018 | W | 2 | 0.06 | 0.03 | 1.79 | 0.19 |
| | | I | 3 | 2.66 | 0.89 | 55.68 | 0.00 |
| | | W × I | 6 | 0.24 | 0.04 | 2.56 | 0.04 |
| | 2018-2019 | W | 2 | 0.03 | 0.01 | 3.12 | 0.06 |
| | | I | 3 | 2.87 | 0.96 | 210.39 | 0.00 |
| | | W × I | 6 | 0.19 | 0.03 | 7.08 | 0.00 |

Note: Df= Degree of freedom; SS= Sum of squares; MS= Mean square; F= F-value; P= P-value.

Supplementary Table 3. Output of the two-way ANOVA for FF under three water qualities (W), four irrigation scenarios (I) and their interactions (W × I).

| Particular | Year | Source | Df | SS | MS | F | P |
|-----------------------|-----------|--------|----|------|------|--------|------|
| Fruit firmness | 2017-2018 | W | 2 | 0.00 | 0.00 | 1.00 | 0.38 |
| | | I | 3 | 2.52 | 0.84 | 431.29 | 0.00 |
| | | W × I | 6 | 0.03 | 0.01 | 2.71 | 0.04 |
| | 2018-2019 | W | 2 | 0.02 | 0.01 | 1.64 | 0.21 |
| | | I | 3 | 1.73 | 0.58 | 87.65 | 0.00 |
| | | W × I | 6 | 0.10 | 0.02 | 2.60 | 0.04 |

Note: Df= Degree of freedom; SS= Sum of squares; MS= Mean square; F= F-value; P= P-value.

Supplementary Table 4. Output of the two-way ANOVA for fruit pH under three water qualities (W), four irrigation scenarios (I) and their interactions (W × I).

| Particular | Year | Source | Df | SS | MS | F | P |
|-----------------|-----------|--------|----|------|------|--------|------|
| Fruit pH | 2017-2018 | W | 2 | 0.03 | 0.02 | 141.64 | 0.00 |
| | | I | 3 | 0.06 | 0.02 | 169.26 | 0.00 |
| | | W × I | 6 | 0.01 | 0.00 | 8.92 | 0.03 |
| | 2018-2019 | W | 2 | 0.01 | 0.00 | 22.58 | 0.00 |
| | | I | 3 | 0.06 | 0.02 | 140.55 | 0.00 |
| | | W × I | 6 | 0.00 | 0.00 | 1.03 | 0.04 |

Note: Df= Degree of freedom; SS= Sum of squares; MS= Mean square; F= F-value; P= P-value

Supplementary Table 5. Treatments in experimental design and their description.

| No. of treatment | Treatment | Water source | Irrigation level | Scenario |
|------------------|------------------|---------------------|------------------|----------|
| 1 | GWI | Groundwater | 100% FC | Control |
| 2 | GWI ₁ | Groundwater | 80% FC | Test |
| 3 | GWI ₂ | Groundwater | 70% FC | Test |
| 4 | GWI ₃ | Groundwater | 60% FC | Test |
| 5 | RWI | Recycled wastewater | 100% FC | Control |
| 6 | RWI ₁ | Recycled wastewater | 80% FC | Test |
| 7 | RWI ₂ | Recycled wastewater | 70% FC | Test |
| 8 | RWI ₃ | Recycled wastewater | 60% FC | Test |
| 9 | MWI | Mixed water | 100% FC | Control |
| 10 | MWI ₁ | Mixed water | 80% FC | Test |
| 11 | MWI ₂ | Mixed water | 70% FC | Test |
| 12 | MWI ₃ | Mixed water | 60% FC | Test |