**Table S1. Foliar injury index (FII) and rating of injury based on percentage of leaf area injured under elevated $O_3$ treatment.**

| Rating of injury | % injured leaf area | FII |
|---|---|---|
| Slight | 1–15 | 1 |
| Moderate | 16–25 | 2 |
| Moderate-severe | 26–50 | 3 |
| Severe | 51–75 | 4 |
| Very Severe | >75 | 5 |

**Table S2.** F values and significance levels for various growth and physiological parameters of tomato cultivars as obtained by multivariate ANOVA test. Level of significance at *$p \leq 0.05$; **$p \leq 0.01$; ***$p \leq 0.001$; ns- non-significant

| Parameters | Age (A) | Treatment (T) | Cultivar (Cv) | A × T | A × Cv | Cv × T | A × T × Cv |
|---|---|---|---|---|---|---|---|
| Plant Height | 5520.43*** | 427.35*** | 133.89*** | 35.56*** | 75.65*** | 2.58* | 1.504ns |
| Number of leaves | 6119.32*** | 449.33*** | 1532.37*** | 60.62*** | 369.22*** | 18.99*** | 6.19*** |
| Leaf Area | 8048.91*** | 863.36*** | 2829.02*** | 185.85*** | 734.17*** | 80.91*** | 22.85*** |
| Total biomass | 8176.78*** | 272.13*** | 185.55*** | 180.76*** | 158.35*** | 8.41*** | 5.592*** |
| Chlorophyll | 5.2** | 433.93*** | 418.88*** | 60.99*** | 67.63*** | 6.32*** | 5.91*** |
| Carotenoid | 162.57*** | 249.13*** | 95.07*** | 61.42*** | 19.42*** | 5.99*** | 3.19*** |
| Photosynthetic rate | 59.02*** | 433.81*** | 154.58*** | 30.41*** | 61.09*** | 4.18*** | 1.81* |
| Stomatal conductance | 35.7*** | 543.04*** | 35.86*** | 2.79ns | 15.98*** | 3.32** | 2.43** |
| Internal $CO_2$ | 175.23*** | 116.3*** | 28.71*** | 9.33*** | 294.16*** | 52.07*** | 27.18*** |
| Transpiration | 364.39*** | 331.47*** | 606.41*** | 0.79ns | 261.87*** | 50.12*** | 9.53*** |

**Table S3.** F ratios and levels of significance of two-way ANOVA test for different parameters of selected tomato cultivars

| **Parameters** | **Treatment** | **Cultivar** | **Treatment × Cultivar** |
|---|---|---|---|
| Number of flowers | 14.76*** | 504.41*** | 1.32ns |
| Number of Bud cluster | 14.87*** | 424.82*** | 3.83** |
| Number of flowers aborted | 30.14*** | 102.87*** | 9.95*** |
| Fruit Setting Ratio | 12.7*** | 51.61*** | 11.21*** |
| Number of fruits | 22.7*** | 614.56*** | 8.03*** |
| Fruit length | 49.72*** | 79.34*** | 4.93*** |
| Fruit diameter | 100.17*** | 241.36*** | 12.34*** |
| Average fruit weight | 81.8*** | 342.08*** | 21.91*** |
| Yield | 81.77*** | 46.83*** | 2.09* |

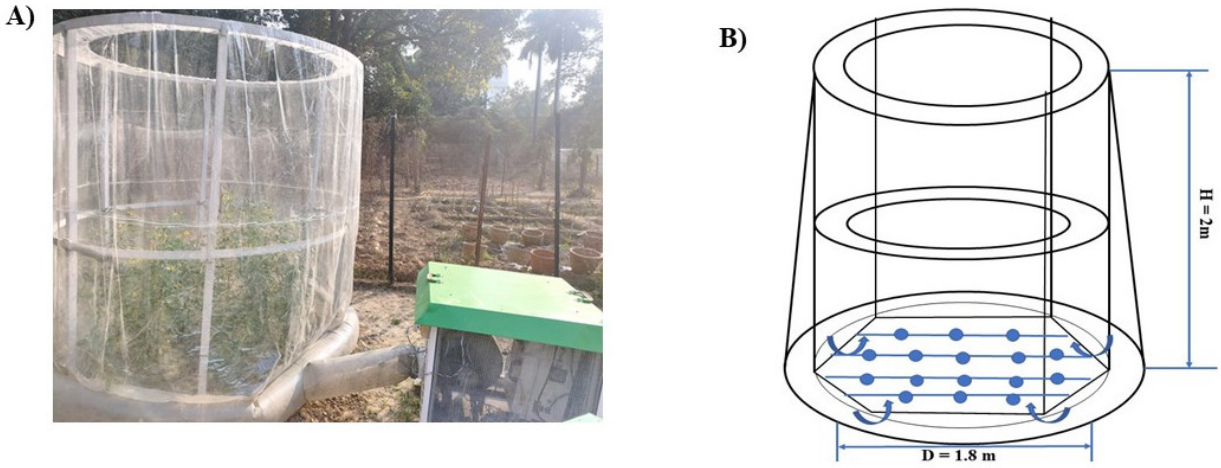


**Figure S1.** (A) Open top chamber (B) Schematic representation of open-top chambers; blue dots represent the arrangement of plants inside the OTC.