

Table S2 Summary of meteorological conditions. Summary of weather conditions from days on which data were collected using the HTPP system. The summarized environmental parameter data were collected hourly from 0700-1600 MST from 2010-12, as this encompasses the time when the HTPP system would be used in the field. The meteorological data were collected by the AZMET weather station located at the Maricopa Agricultural Center of the University of Arizona located in Maricopa, AZ.

| Year | DOY ^a | Air temp. (C°) | RH (%) ^b | VPD (kPa) ^c | Solar rad. (MJ/m ²) ^d | Precip. (mm) | 10.2 cm soil temp (C°) | Ave. wind speed (m/s) | Ref ET (mm) ^e |
|------|------------------|----------------|---------------------|------------------------|--|--------------|------------------------|-----------------------|--------------------------|
| 2010 | 182 | 38.39 | 21.19 | 5.50 | 2.44 | 0 | 30.65 | 4.51 | 0.77 |
| | 217 | 36.61 | 22.58 | 5.14 | 2.44 | 0 | 34.25 | 1.30 | 0.64 |
| | 224 | 36.52 | 22.58 | 4.96 | 2.36 | 0 | 35.88 | 2.18 | 0.64 |
| | 231 | 35.29 | 39.75 | 3.78 | 2.29 | 0 | 30.97 | 0.95 | 0.56 |
| 2011 | 188 | 35.17 | 33.88 | 3.92 | 2.46 | 0 | 33.39 | 2.49 | 0.65 |
| | 195 | 31.58 | 14.54 | 4.19 | 2.67 | 0 | 29.90 | 2.78 | 0.74 |
| | 202 | 35.35 | 28.29 | 4.33 | 2.20 | 0 | 33.35 | 2.18 | 0.58 |
| | 216 | 34.95 | 35.86 | 3.92 | 2.36 | 0 | 33.93 | 1.51 | 0.60 |
| | 223 | 33.01 | 42.26 | 3.00 | 2.27 | 0 | 32.76 | 1.62 | 0.56 |
| | 230 | 37.72 | 27.05 | 5.05 | 2.21 | 0 | 33.37 | 2.33 | 0.62 |
| | 237 | 36.98 | 25.65 | 4.89 | 1.94 | 0 | 35.29 | 2.17 | 0.55 |
| | 244 | 35.63 | 29.70 | 4.53 | 2.14 | 0 | 32.66 | 1.51 | 0.57 |
| 2012 | 251 | 35.17 | 23.91 | 4.72 | 2.19 | 0 | 32.04 | 1.27 | 0.57 |
| | 201 | 35.71 | 19.67 | 4.83 | 1.88 | 0 | 32.35 | 2.89 | 0.55 |
| | 208 | 35.31 | 24.96 | 4.52 | 2.33 | 0 | 34.30 | 2.87 | 0.66 |
| | 215 | 34.34 | 31.00 | 3.99 | 2.42 | 0 | 32.33 | 1.82 | 0.63 |
| | 222 | 37.76 | 27.70 | 4.94 | 2.36 | 0 | 35.01 | 1.85 | 0.64 |
| | 243 | 33.13 | 43.80 | 3.02 | 2.12 | 0 | 32.85 | 2.34 | 0.55 |
| | 250 | 33.21 | 47.08 | 2.85 | 1.91 | 0 | 34.18 | 1.49 | 0.47 |
| 258 | 29.20 | 30.15 | 2.92 | 2.12 | 0 | 27.50 | 5.85 | 0.66 | |

a. DOY, day of year - Julian calendar.

b. RH, relative humidity.

c. VPD, vapor pressure deficit.

d. Solar rad, solar radiation.

e. Ref ET, reference evapotranspiration using Penman-Monteith method.