

Supplemental Tables

Table S1. Average temperature (°C) ofCitrus sinensis collection site from January to December that recorded from 1981 to 2010 for Huaning, Huaihua, Shaoguan, Guilin, Ganzhou and Chongqing.

| Month | Place | | | | | |
|-------|-----------------|-----------------|------------------|----------------|-----------------|-------------------|
| | Huaning (°C) | Huaihua (°C) | Shaoguan (°C) | Guilin (°C) | Ganzhou (°C) | Chongqing (°C) |
| 1 | 9.5 | 4.9 | 10.3 | 8.1 | 8.2 | 7.9 |
| 2 | 11.3 | 7.2 | 12.3 | 9.9 | 9.8 | 10 |
| 3 | 14.5 | 11.2 | 15.3 | 13.3 | 13.6 | 13.8 |
| 4 | 17.9 | 17.4 | 20.7 | 19 | 19.6 | 18.5 |
| 5 | 20.1 | 22.4 | 24.6 | 23.3 | 23.8 | 22.6 |
| 6 | 21.3 | 25.8 | 27.3 | 26.4 | 27.1 | 25.1 |
| 7 | 21 | 29.2 | 29 | 28.2 | 29.4 | 28.3 |
| 8 | 20.7 | 28.3 | 28.7 | 28.2 | 28.8 | 28.3 |
| 9 | 19.4 | 23.9 | 26.4 | 25.6 | 25.8 | 24.1 |
| 10 | 17 | 18.4 | 22.5 | 21.1 | 21.2 | 18.6 |
| 11 | 12.9 | 12.8 | 17 | 15.8 | 15.4 | 14.2 |
| 12 | 9.6 | 7.3 | 11.9 | 10.6 | 10.3 | 9.3 |

Table S2. Average rainfall (mm) ofCitrus sinensis collection site from January to December that recorded from 1981 to 2010 for Huaning, Huaihua, Shaoguan, Guilin, Ganzhou and Chongqing.

| Month | Place | | | | | |
|-------|-----------------|-----------------|------------------|----------------|-----------------|-------------------|
| | Huaning (mm) | Huaihua (mm) | Shaoguan (mm) | Guilin (mm) | Ganzhou (mm) | Chongqing (mm) |
| 1 | 16.6 | 73.7 | 69.3 | 65.7 | 65.1 | 19.7 |
| 2 | 17.6 | 94.6 | 106 | 99.2 | 113.1 | 23.3 |
| 3 | 18.1 | 139.6 | 177.9 | 136.9 | 181.2 | 43.2 |
| 4 | 34.8 | 187.9 | 221.1 | 217.8 | 195.4 | 95.2 |
| 5 | 91.1 | 181.1 | 248.9 | 324.5 | 233.3 | 145.9 |
| 6 | 140.5 | 223.6 | 249.6 | 395.2 | 180.2 | 192.6 |
| 7 | 180.5 | 142.6 | 159.4 | 232.2 | 115.8 | 186 |
| 8 | 177.7 | 107.1 | 129.1 | 147.4 | 134.6 | 137.9 |
| 9 | 96.9 | 76.5 | 100.8 | 82.2 | 90.3 | 105.8 |
| 10 | 75.1 | 72.6 | 43.8 | 66.8 | 66 | 85.8 |
| 11 | 44.9 | 81.4 | 51.9 | 73.1 | 48 | 48.3 |
| 12 | 15.1 | 47.4 | 41.7 | 46.8 | 38.2 | 24.3 |

Table S3. Average sunshine duration hours (h) of *Citrus sinensis* collection site from January to December that recorded from 1981 to 2010 for Huaning, Huaihua, Shaoguan, Guilin, Ganzhou and Chongqing.

| Month | Place | | | | | |
|-------|----------------|----------------|-----------------|---------------|----------------|------------------|
| | Huaning (h) | Huaihua (h) | Shaoguan (h) | Guilin (h) | Ganzhou (h) | Chongqing (h) |
| 1 | 224.5 | 76.2 | 89.7 | 66.9 | 87.8 | 20.6 |
| 2 | 219.6 | 63 | 67.5 | 50 | 73.5 | 29.7 |
| 3 | 255.4 | 69.4 | 57.6 | 51.6 | 72.3 | 64.9 |
| 4 | 244.8 | 88.3 | 75.5 | 72.6 | 100.5 | 93.6 |
| 5 | 212.2 | 122.8 | 113.9 | 109.5 | 137.8 | 109.4 |
| 6 | 135 | 144.8 | 150.5 | 131.1 | 173.1 | 97.7 |
| 7 | 124.3 | 238.3 | 226.6 | 199.4 | 261 | 158.6 |
| 8 | 144.9 | 229.6 | 206.7 | 204.1 | 235.8 | 167 |
| 9 | 123.5 | 160 | 177.6 | 193.4 | 182.1 | 106.6 |
| 10 | 143.7 | 133.4 | 164 | 157.1 | 165.2 | 50.4 |
| 11 | 169.8 | 115.7 | 147 | 134.4 | 147.1 | 35.9 |
| 12 | 200 | 103.2 | 140.8 | 117.2 | 142.1 | 20.4 |