**Supplementary information**

Table S1. Some information about weedy and cultivated rice.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Population** | **Tiller (n)** | **Flag-leaf  length (cm)** | **Flag-leaf   width (cm)** | **Average temperature  on the day of flowering (℃)** |
| TZWR | 24.6A | 33.3A | 1.80A | 25.5 |
| TZCR | 12.6B | 20.83B | 1.77A | 25 |
| YZWR | 18.45A | 32.7A | 1.67B | 26.5 |
| YZCR | 16.07B | 32.53A | 1.97A | 26.5 |
| MMWR | 12.23A | 27.27A | 1.80A | 24.5 |
| MMCR | 10.57B | 28.23A | 1.67A | 25.5 |
| DDWR | 12.12A | 32.07B | 1.33B | 25.5 |
| DDCR | 8.82B | 24.23A | 2.23A | 24 |

Different capital letters in columns indicate statistically significant differences between the weedy rice and associated cultivated rice accessions.

Table S2. Comparison of plant traits between weedy and cultivated rice accessions

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Population** | **Plant height, cm** | **Panicle length, cm** | **1000-grain weight, g** | **Seed setting rate (%**) | Yield/ plant | Shattering rate (%) |
| TZWR | 86.93A | 23.97A | 22.90B | 81.15B | 42.60A | 35.86A |
| TZCR | 89.93A | 14.45B | 25.65A | 98.66A | 33.49B | 0.49B |
| YZWR | 85.53B | 21.74B | 22.83B | 88.41B | 23.71B | 31.23A |
| YZCR | 108.53A | 28.95A | 26.78A | 92.70A | 43.42A | 19.89B |
| MMWR | 166.97A | 28.50A | 21.29B | 93.60A | 41.16A | 41.69A |
| MMCR | 97.64B | 24.00B | 25.02A | 92.10A | 37.34A | 24.74B |
| DDWR | 105.53A | 18.66A | 21.49B | 91.85B | 25.14A | 49.25A |
| DDCR | 98.20B | 19.86A | 25.49A | 97.85A | 28.73A | 0.33B |

Different capital letters in columns indicate statistically significant differences between the weedy rice and associated cultivated rice accessions.

Table S3. Phenological period of the experimental weedy and cultivated rice accessions used in the experiments

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Population** | **Flowering date** | **Maturity date** | **Grain-filling**  **period (days)** | **Growth period (days)** |
| TZWR | 2015-8-27 | 2015-10-5 | 39 | 132 |
| TZCR | 2015-9-7 | 2015-11-1 | 55 | 159 |
| YZWR | 2015-8-28 | 2015-10-2 | 35 | 129 |
| YZCR | 2015-8-30 | 2015-10-18 | 49 | 145 |
| MMWR | 2015-8-24 | 2015-10-2 | 39 | 129 |
| MMCR | 2015-8-27 | 2015-10-11 | 45 | 138 |
| DDWR | 2015-7-24 | 2015-9-3 | 41 | 100 |
| DDCR | 2015-8-20 | 2015-10-12 | 53 | 139 |

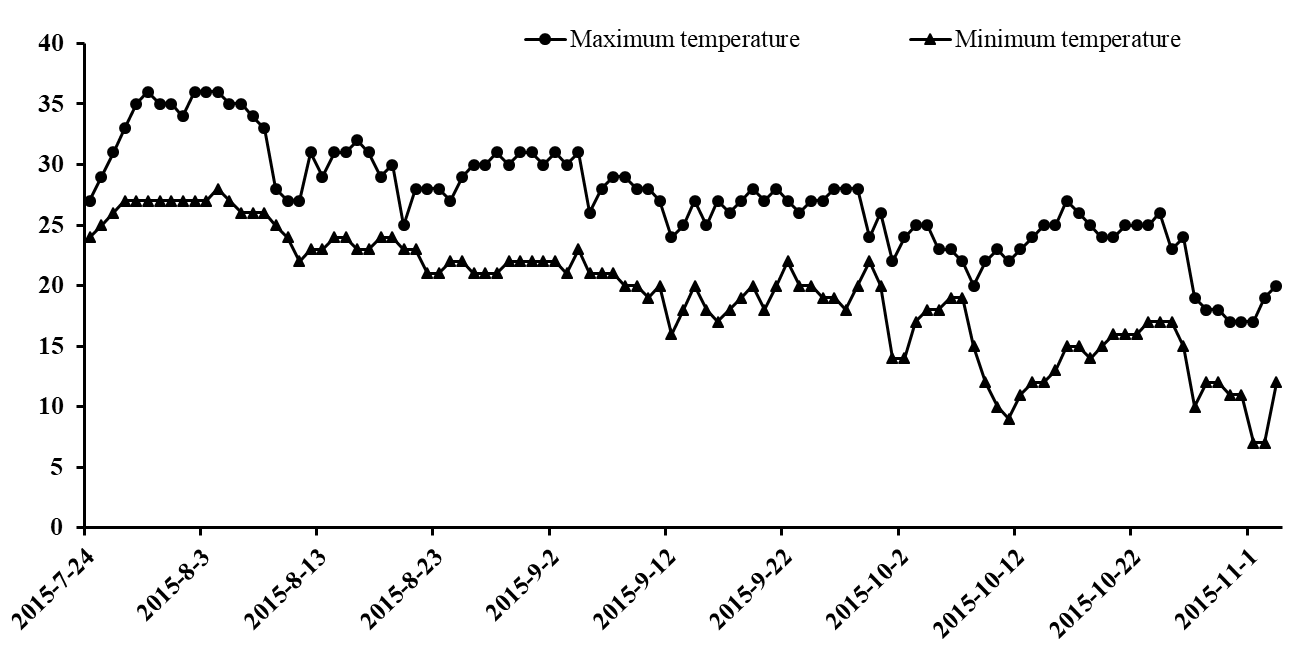


Fig. S1. The maximum and minimum temperature per day from flowering to maturity of weedy and cultivated rice in 2015 at Nanjing (from July 24 to November 2).