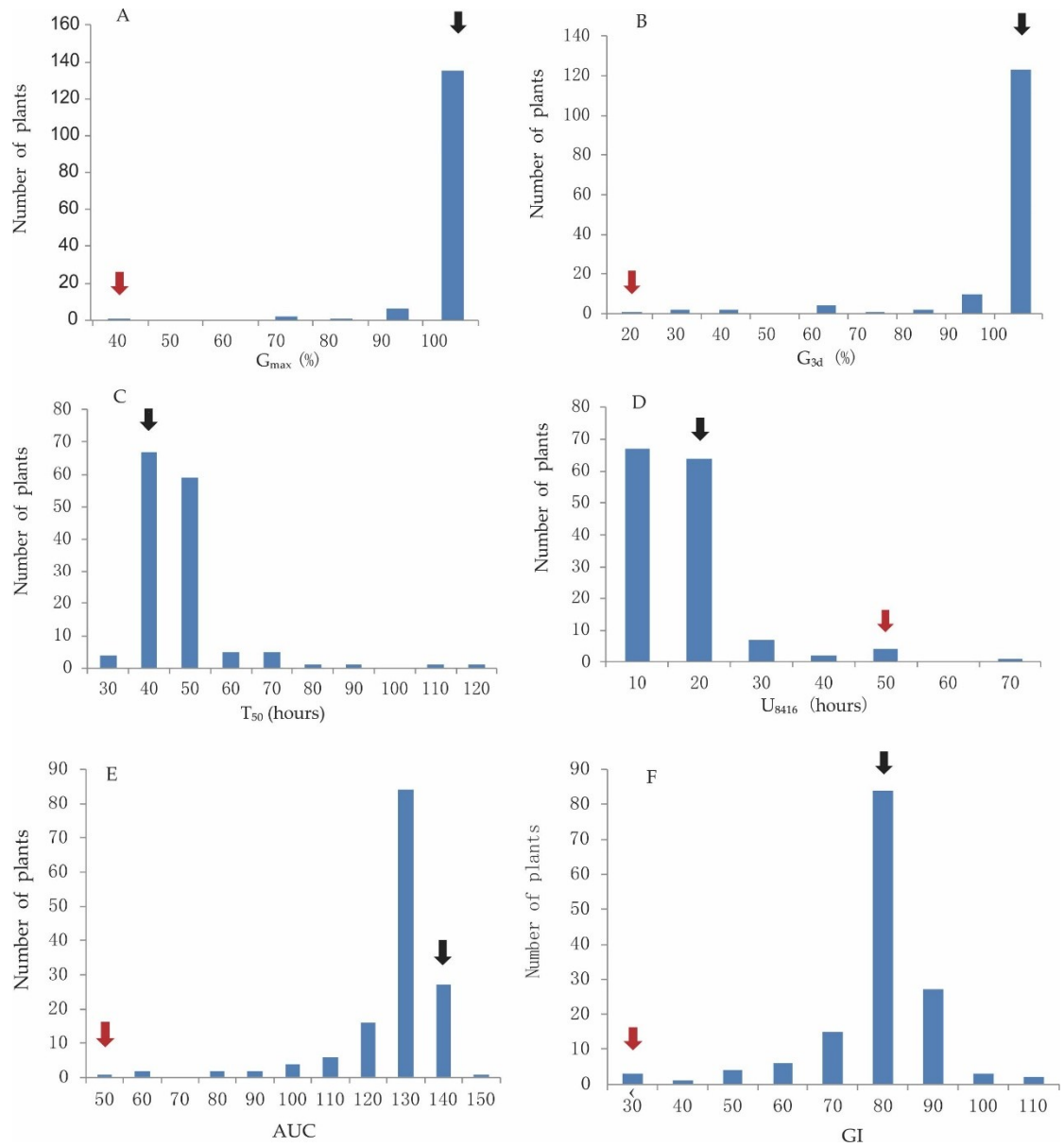
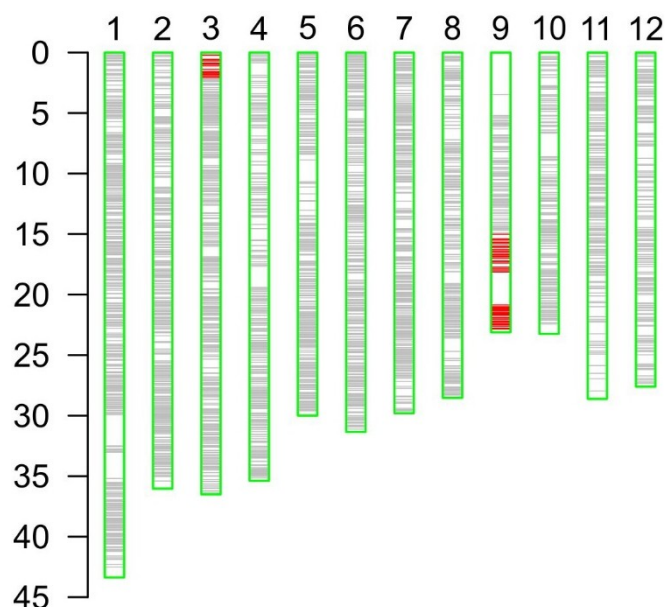
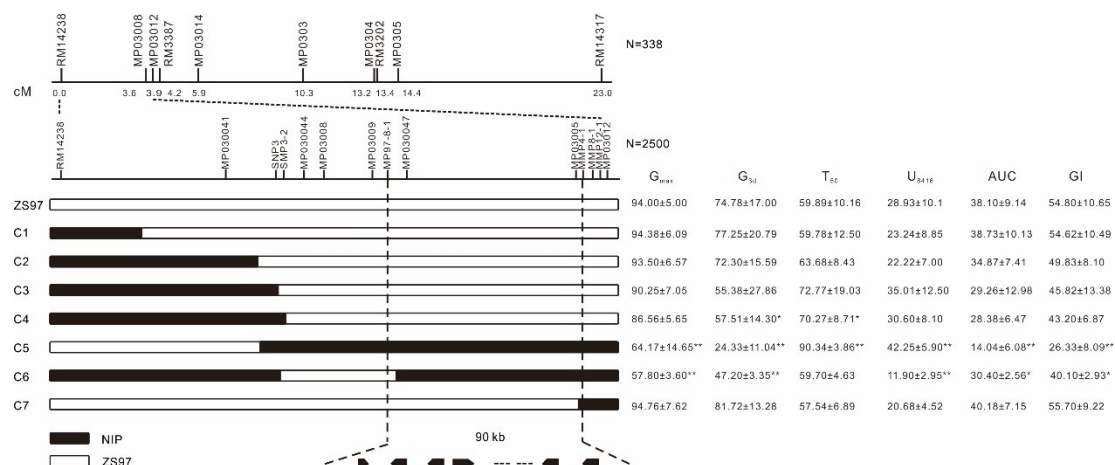




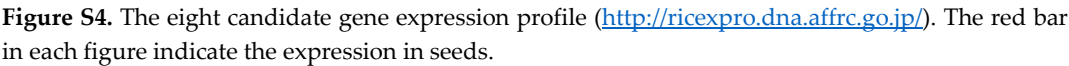
**Figure S1.** Frequency distribution of (A)  $G_{max}$ , maximum germination percentage of seven days germination; (B)  $G_{3d}$ , germination percentage at three days; (C)  $T_{50}$ , time to reach 50% germination of the total number of germinated seeds; (D)  $U_{8416}$ , germination uniformity, which is time interval between 84% and 16% of viable seed to germinate; (E) AUC; area under the germination curve until 168 h; (F) GI, germination index. Black arrow indicates ZS97 performance and red arrow indicates NIP performance.



**Figure S2.** Graphic representation of the genotype of NQ96 showing several introduced segments, of which the segment on chromosome 3 harbors the target QTL.



**Figure S3.** Fine mapping of *qDOM3.1*. The QTL narrowed down to the region flanked by MP97-8-1 and MMP4-1 on the upper end of chromosome 3. Some important recombinant plants derived from a large F<sub>2</sub> groups generated by selfing a single individual heterozygous at the *qDOM3.1* region and divided into 7 groups based on their genotypes.  $G_{max}$  (mean ± sd) (%) at 168 hours,  $G_{3d}$ ,  $T_{50}$ ,  $U_{8416}$ , AUC and GI was given on the right for each genotype. The phenotypes of each recombinant individual were evaluated by germination experiments. \* and \*\* indicate significant difference at  $p < 0.05$  and  $p < 0.01$  by Dunnett's test against ZS97, respectively.



**Table S1.** Summary information on AS-PCR, SSR and Indel markers for *qDOM3.1* validation and fine-mapping.

| Marker    | Type   | Forward primer          | Reverse primer             | CHR |
|-----------|--------|-------------------------|----------------------------|-----|
| SNP3      | AS-PCR | CGGGAGCGGCTGTGCGGTAG    | AGCAGCTTCTTGAAGCGGTAGGTGGT | 3   |
| SNP3      | AS-PCR | CGGGAGCGGCTGTGCGGTAT    | AGCAGCTTCTTGAAGCGGTAGGTGGT | 3   |
| SMP-3-2   | SNP    | AGCCTAGTATGTGGCCCTGAA   | CATTCCACGCCATTAAACA        | 3   |
| MMP97-8-1 | SNP    | ATGATTGATACGGTTCTCG     | ACTTATTCCTGGGTGCTAC        | 3   |
| MMP-4-1   | SNP    | CAGAAGCAAGGGTTACACG     | CAGGAAATCATACCGAAGA        | 3   |
| MMP-8-1   | SNP    | TTAAGGGTCAAATGTCTGT     | ACATCTTGTCCTGGTCTG         | 3   |
| MMP-12-1  | SNP    | TCTACCTCCCGCTGCTAAT     | TCCGTCGCTTCATTCTAAC        | 3   |
| MP0303    | Indel  | GGGGAACACGAAGAATAAGT    | GCTTGATTAATGGCAAGAAC       | 3   |
| MP0304    | Indel  | AGGAACACATACGAATGGAG    | AGAGCATCATGCAGGTCC         | 3   |
| MP0305    | Indel  | GGTTATGATTTCGTTGGA AAA  | AAACAAATACTCCCTCTCAAAA     | 3   |
| MP03008   | Indel  | TTTGGTCTGTATCCCATTG     | TCATAGGTCACGATCTTGCT       | 3   |
| MP03009   | Indel  | GCAGCAACAAAAGAGTAACG    | TCATGTGTGGGGTAATCTGT       | 3   |
| MP03012   | Indel  | GCACTGTGAACACCCTTACA    | CCTGAAACGGAGGGATTA         | 3   |
| MP03014   | Indel  | TTCAACACAGAAGTTCACCA    | CAATAGCTACGTCCTCCTGA       | 3   |
| MP030041  | Indel  | ACCACTAATACTAGCAGCAGG   | TAGAGGAGGGGTACTTTCA        | 3   |
| MP030044  | Indel  | TACAAATAGAAAGCAAAGGAG   | TCATGTTAAGTATCCCACAAA      | 3   |
| MP030047  | Indel  | CTAGTCCGTGATATGGAAGG    | CCACCCAGTTGTTGATTATT       | 3   |
| MP030050  | Indel  | CACTGATGAACAGCCATTCT    | TGATGATAGGCACAATACCC       | 3   |
| RM3202    | SSR    | TCATCATCATCAGTCCAGCATCG | GCGGCGATTGAATTGTTTCTTAGG   | 3   |
| RM3387    | SSR    | GTGTAGCAGCAGCTGGACAACC  | GTGCGAGATCGAGGCAAATACG     | 3   |
| RM14317   | SSR    | TGAATTCTTGCACATGGTCAGC  | TGGGAGGTTTGCTAGGGTAATCC    | 3   |
| RM14238   | SSR    | CCGTCTCTCTGTTGTTGTTCTGC | TGGTTCGCCAACAATTAAGACG     | 3   |

**Table S2.** Primers for Real-Time PCR.

| Gene                  | Forward primer          | Reverse primer         |
|-----------------------|-------------------------|------------------------|
| <i>LOC_Os03g01350</i> | TTGATTGCAGCCTTTGGTGTTG  | TCGTCCCTGGTTGAATCCTTA  |
| <i>LOC_Os03g01360</i> | TTCTGCACGGCAGTGGAGTC    | TGAAACCTATCGCCTGGGAG   |
| <i>LOC_Os03g01420</i> | CTCTAACATCTGCATATCCCACA | GATTCCCATTACCGACTTCC   |
| <i>LOC_Os03g01442</i> | GGATGCGAGCGTATGGTGTC    | TGCGTCAGAAAAGTTGGAAG   |
| <i>LOC_Os03g01470</i> | GATGGTAGGGGCGAGGGG      | GCCACCCTGACGCCAATC     |
| <i>LOC_Os03g01490</i> | AGGGTTGAGTATGTGCCTGAG   | GAGGTTAGAAGCAGCCAAGTAG |
| <i>LOC_Os03g01530</i> | GGGCCAAGGGACACTACACC    | CCAAGCGAGTGGCAAACCTG   |
| <i>LOC_Os03g01540</i> | GCCTCCAGCCCCACCTTCTC    | CACCCTCCCATTGACTTTG    |
| <i>OsActin</i>        | GAATGCTAAGCCAAGAGGAG    | AATCACAAGTGAGAACCACAG  |