**Supplementary Tables**

Supplementary Table S1. Primers used in this study.

|  |
| --- |
| ***dCAPS marker primers*** |
| **Primer name** | **Forward primer sequence (5’-3’)** | **Reverse primer sequence (5’-3’)** |
| E8986-dcaps(*Solyc01g095370*) | CCCGCATGCCACACAAGTATTT | ATCACATATCAGGGAGACATCTCAAGCCAT |
| ***RT-qPCR primers*** |
| **Primer name** | **Forward primer sequence (5’-3’)** | **Reverse primer sequence (5’-3’)** |
| miR156-RT | CTTCTGTCAACTATGCTCTCCA | GCCTTGACAGAAGATAGAGAGC |
| miR159-RT | TCAATCCAAATCATGTTCTCC | TTTGGATTGAAGGGAGCTCTA |
| miR164-RT | TGCTTCTCCACTATCCTCTCC | TGGAGAAGCAGGGCACGT |
| miR172-RT | TCAAGATTCTCTATACTCTCCAGG | AGAATCTTGATGATGCTGCATAAG |
| SlHWS-RT(*Solyc01g095370*) | GGTTATGCCTATGATCCTTCCC | TCGCTTCTACTGTCATTGTCC |
| ARF17-RT(*Solyc11g013480*) | TTATCTGTTCGTTTTCTCGC | TCCCTCATAGTAACTTCATC |
| GOB-RT(*Solyc07g062840*) | AATATCGCCTTGATGGCAAA | GAGAGACGGAAGACGGTGAA |
| RMF-RT(*Solyc01g095870*) | CTAGGTTCCCACAACGAGAAG | TTTCCTACCCATGACTTGAGATC |
| CalS5-RT(*Solyc11g005980*) | GTCATGCTGTTCAAATTCCTAAGTC | TTCACAGATCCCCACATTCC |
| A6 (*Solyc12g098560*) | GCCAAGTATAGGGAAGATGGTG | CACTAAAGAGAAACATATGGAAATTTGC |
| SAND-RT(*Solyc03g115810*) | TTGCTTGGAGGAACAGACG | GCAAACAGAACCCCTGAATC |
| ***two-tailed RT-qPCR* *primers*** |
| miR156-tt | CTTCTGTCAACTATGCTCTCCAGACACAGTTGGTGTCTGTCTCCACTTGTGCTC |
| miR159-tt | TCAATCCAAATCATGTTCTCCAGGTACAGTTGGTACCTGTGTCCACTTTAGAG |
| miR164-tt | TGCTTCTCCACTATCCTCTCCAGGTACAGTTGGTACCTGTCTCCACTTTGCAC |
| miR172-tt | TCAAGATTCTCTATACTCTCCAGGTACAGTTGGTACCTGTCTCCACTTATGCA |
| ***TILLING primers*** |
| **Primer name** | **Forward primer sequence (5’-3’)** | **Reverse primer sequence (5’-3’)** |
| F-box-TILL1-2 | CCACAGCCTTAGGGTTGGAG | ACGGTCTGGTTTCCCAATCC |
| F-box-TILL2-2 | GCATTGGCTATCTGTGCAAACA | AGACAACTTGTCCCTGTCTTGG |

Supplementary Table S2. Genetic analysis of mutant phenotype.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cross | Generation | Number of plants with associated phenotype | χ2 value | *P* value |
| Normal leaf morphology(WT-like) | Abnormal leaf morphology(Mutant-like) |  |  |
| WT x *slhws-1* | F1 | 6 | 0 | - | - |
|  | F2 | 77 | 30 | 0.53 | 0.47 |

Inheritance pattern was determined based on the χ2 value. Significant difference was estimated at level of 0.05.

Supplementary Table S4. Phenotype and genotype observed in F2 generation.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cross combination | Observed phenotypes in F2 population | Expected ratio (W/W:W/m:m/m) | χ2 value | *P* value |
| Wild type-like | Mutant-like |
| Genotype | Genotype |
| W/W | W/m | m/m | W/W | W/m | m/m |  |  |  |
| WT x *slhws-1* | 38 | 66 | 0 | 0 | 0 | 24 | 1:2:1 | 3.19 | 0.2 |

Inheritance pattern was determined based on the χ2 value. Significant difference was estimated at level of 0.05.

Abbreviations: W/W, Homozygous dominant for the wild type allele; W/m, Heterozygote; m/m, Homozygous recessive for the mutant allele.

Supplementary Table S5. Allelism test of *slhws-1* x *slhws-3*.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cross | Generation | Number of plants with associated phenotype | χ2 value | *P* value |
| Normal leaf morphology(WT-like) | Abnormal leaf morphology(Mutant-like) |  |  |
| Homozygous *slhws-1* x Heterozygous *slhws-3* | F1 | 3 | 4 | 0.14 | 0.71 |

Inheritance pattern was determined based on the χ2 value. Significant difference was estimated at level of 0.05.

Supplementary Table S6. Characterization of *slhws-1* and *slhws-2* in spring season.

|  |  |  |  |
| --- | --- | --- | --- |
| Traits |  WT |  *slhws-1*  |  *slhws-2*  |
| **General architecture** |  |  |  |
| Plant height (cm) a |  8.3 + 0.2  |  6.8 + 0.2 \*  |  3.6 + 0.2 \* |
| Stem diameter (mm) a |  6.0 + 0.2  |  5.1 + 0.2 \* |  4.1 + 0.3 \* |
| Number of lateral shoots a |  3.6 + 0.1  |  0.2 + 0.0 \* |  0.5 + 0.2 \* |
| **Reproductive traits** |  |  |  |
| Number of flowers  |  12.8 + 0.8  |  6.9 + 0.4 \* |  6.4 + 0.4 \* |
| Fruit set (%) |  90.0 + 2.4  |  85.0 + 3.0  |  18.2 + 6.2 \* |
| Days to first anthesis (DAS) |  35.0 + 0.3  |  39.0 + 0.2 \* |  38.0 + 0.3 \*  |
| **Fruit related traits** |  |  |  |
| Fruit weight (g) b  |  9.2 + 0.4  |  8.1 + 0.3 \* |  5.2 + 0.4 \* |
| Fruit diameter (mm) b  |  28.2 + 0.3  |  26.0 + 0.2 \* |  20.8 + 0.5 \* |
| Fruit shape index b |  0.8 + 0.0  |  0.9 + 0.0 \* |  1.0 + 0.0 \* |
| Pericarp thickness (mm) b |  2.6 + 0.1  |  3.4 + 0.1 \* |  3.7 + 0.1 \* |
| Number of locules/fruit b |  3.7 + 0.2  |  3.8 + 0.1  |  3.1 + 0.1 \* |
| Number of seeds/fruit b |  60.0 + 3.6  |  0.1 + 0.1 \* |  0.3 + 0.1 \* |
| Total soluble solids ($°$Brix) b |  4.4 + 0.1  |  6.3 + 0.1 \* |  5.9 + 0.1 \* |
| Fruit firmness (gf) c |  436.3 + 10.6 |  437.4 + 9.1 | 475.0 + 20.7 |
| Fruit brightness (L\*) c |  46.5 + 0.3 |  43.2 + 0.8 \* |  38.7 + 0.5 \* |
| a\*/b\* c |  0.8 + 0.0 |  1.0 + 0.0 \* |  1.1 + 0.0 \* |

Values are means + SE (n>11plants). Mean values of *slhws-1* and *slhws-2* followed by asterisk (\*) are significantly different from the mean value of the WT according to a t-student test *P* <0.05. *DAS,* days after sowing. a, measured on 30 DAS. b, average of 50 fruits. c, average of at least 5 fruits.