**Supplementary Material**

Supplemental Figure S1. Plasmid maps of TRV2-GATA-TF, A and TRV2-SPL-TF, B.

**Diagram

Description automatically generated**

(A)

Diagram

Description automatically generated

(B)

Supplemental Table S1. List of primers used in this study.

|  |  |
| --- | --- |
| **Primer name** | **Sequences** |
| *Gohir.D05G103700*-F | ATGGTACCTGGAAGACGTTGAAGGACCT |
| *Gohir.D05G103700*-R | GTTCTAGACGGAAGATAAGCTGGCCAAA |
| *Gohir.D12G153600*-F | AAGGTACCTGCATTCTTGGATGGGAGGT |
| *Gohir.D12G153600*-R | TTTCTAGAGTGATGAAGCGGTGGTTTGT |
| *GhAP1-F* | GTGATGCTGAGGTCGCTTTGAT |
| *GhAP1-R* | ATGGACCAGTTGCCCTGAGATT |
| *GhFUL-F* | AGGAAATGACCCATCAGCCAC |
| *GhFUL-R* | GCTGCACTAGGATTACCCTCTTC |
| *GhSOC1-F* | AGCATGCAGTGGCAGCATCTGA |
| *GhSOC1-R* | TGGCTCTGACGCGGGTTACG |
| *ACTIN1*-F | CCTTCCAGCAGATGTGGATT |
| *ACTIN1*-R | GATCCCTAACTCTCCCCACA |

Note: *Xba*I and *Kpn*I restriction sites introduced in the PCR product via the primers are highlighted in orange.

Supplemental Table S2.Phenotypic data collected from *Gohir.D05G103700*, *Gohir.D12G153600*,and mock treated plants.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Gene | Plant ID | Plant Height (In) | No. of leaves/plant | No. of squares/plant | No. of bracts/square | Observations |
| *Gohir.D05G103700* | G1 | 17.5 | 24 | 4 | 4 | 4 bract square |
| G2 | 18 | 29 | 5 | 4 | 4 bract square |
| G3 | 16 | 17 | 5 | 3 | 4th bract missing |
| G4 | 16 | 16 | 4 | 3 | 4th bract missing |
| G5 | 17.5 | 22 | 4 | 4 | 4 bract square |
| G6 | 17.5 | 21 | 5 | 4 | 4 bract square |
| *Gohir.D12G153600* | P01 | 20 | 21 | 5 | 4 | 4 bract square |
| P02 | 17 | 19 | 6 | 4 | 4 bract square |
| P03 | 15 | 18 | 5 | 4 | 4 bract square |
| P04 | 17 | 19 | 5 | 4 | 4 bract square |
| P05 | 21 | 19 | 6 | 4 | 4 bract square |
| P06 | 19 | 23 | 6 | 4 | 4 bract square |
| Mock control | C1 | 17 | 17 | 4 | 4 | 4 bract square |
| C2 | 18 | 20 | 4 | 4 | 4 bract square |
| C3 | 18 | 23 | 5 | 4 | 4 bract square |
| C4 | 17 | 19 | 4 | 4 | 4 bract square |
| C5 | 19.5 | 26 | 7 | 4 | 4 bract square |
| C6 | 18 | 23 | 5 | 4 | 4 bract square |
| LSD(0.05) |  | 1.81 | 4.30 | 0.99 | 0.36 |  |

Supplemental Table S3. List of the Tobacco rattle virus (TRV) based Virus Induced Gene Silencing (VIGS) constructs.

|  |  |  |
| --- | --- | --- |
| Clone name | Stock # | Description |
| YL192 | CD3-1039 | **pTRV1**. Tobacco rattle virus (TRV) based cDNA clone was placed between the duplicated CaMV *35S* promoter and the nopaline synthase terminator in a T-DNA vector. This construct will be used in VIGS experiments with the following two TRV2 vectors. |
| YL156 | CD3-1040 | **pTRV2-MCS**. Tobacco rattle virus (TRV) based cDNA clone was placed between the duplicated CaMV *35S* promoter and the nopaline synthase terminator in a T-DNA vector. This construct will be used to clone the hairpin oligos of the genes of interest (see Table 1). |