

SUPPLEMENTAL FIGURE LEGENDS

Supplemental Figure 1. Distinct *Mi-1* homologues cosegregate with resistant and susceptible phenotypes in F2 population of *S. arcanum* accessions LA2157 x LA392. An ethidium bromide stained 2% agarose gel of PCR products using intron 1 flanking primers. DNA source in the lanes 1 to 4 are from tomato cvs. Motelle (*Mi-1/Mi-1*), UC82B (*mi/mi*), accessions LA2157 (*Mi-9/Mi-9*) and LA392 (*Mi-9/Mi-9*). Marked lanes are from F2 population with either heat-stable root-knot nematode resistant with homozygous LA2157 alleles, or susceptible F2 with homozygous LA392 alleles for marker on the short arm of chromosome 6. M= 100 bp DNA ladder.

Supplemental Figure 2. Alignment of *Mi* intron 1 amplified using Mint-up and Mint-do primers representing *Mi-1.1*, *Mi-1* and homologues from *S. arcanum* accessions LA2157 [Resistant homologue 1 (*RH1*), *RH2*, *RH3*, and *RH4*] and LA392 [Susceptible homologue 1 (*SH1*), *SH2*, and *SH3*]. Primer regions and exon/intron boundaries are indicated with horizontal blue and red lines, respectively. GenBank accession numbers for the homologues are: *RH1* (EF028059), *RH2* (EF028056), *RH3* (EF028057), *RH4* (EF028058), *SH1* (EF028060), *SH2* (EF028061), and *SH3* (EF028062).

Supplemental Figure 3. TRV-mediated silencing in *S. arcanum* accession LA2157. A, Photo-bleaching symptoms in leaves two weeks after infiltration with TRV-*PDS* construct. B, Percent of leaves with photo-bleaching symptom in plants with the symptom. Significant differences were observed between the two treatments (Chi-square = 285.67, df = 1, $P < 0.0001$). Plants infiltrated with TRV-*PDS* were maintained either at 19°C or 24°C for 8 d. Later, plants were moved to a greenhouse and maintained at 23°C to 27°C. Photo-bleaching symptoms in upper un-inoculated leaves started to appear one week after infiltration.

Supplemental Figure 4. Alignment of *Hmr1* (for homologues of *Meloidogyne* resistance gene *Mi-1*) sequences amplified using RT-PCR with RNA from *S. arcanum* accession LA2157 root tissue and VIGS-F and C2S4 primers. Primer sequences were removed before alignment. GenBank accession numbers for the homologues are: *Hmr1-1* (EG549288), *Hmr1-2* (EG549289), *Hmr1-3* (EG549290), *Hmr1-4* (EG549291), *Hmr1-5* (EG549292), *Hmr1-6* (EG549293).