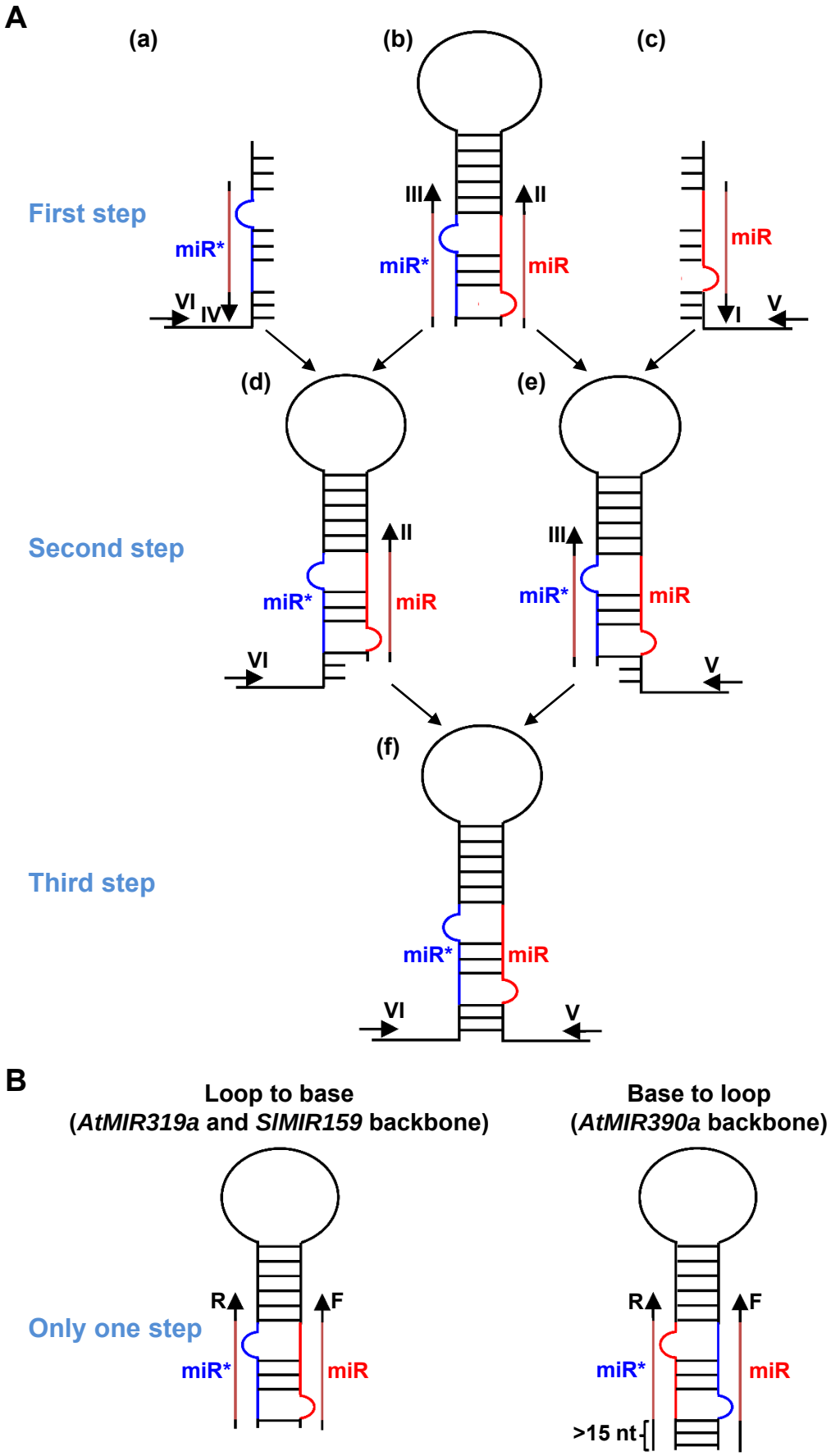
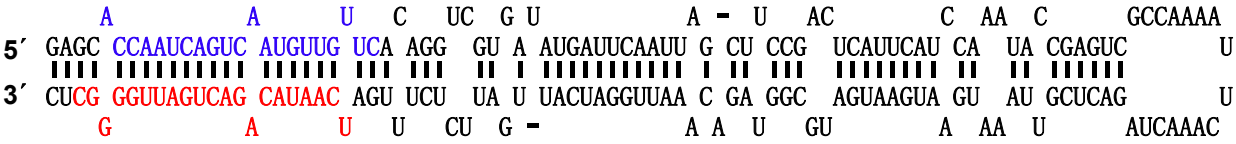
Supplemental Figure S1. Silence of *PDS* by TYLCCNV-amiRPDS(319L) in *N. benthamiana*. *PDS*-silencing phenotype in *N. benthamiana* plants inoculated with TYLCCNV- amiRPDS(319L). TYLCCNV empty vector inoculated plants were used as negative control. Photographs were taken at 30 dpi.

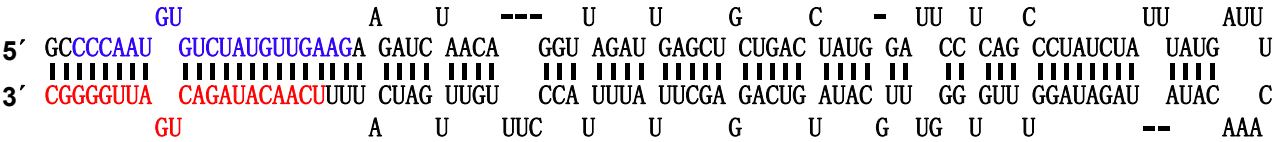


Supplemental Figure S2. Diagram of constructing amiRNA precursor by three-step and one-step PCR. A, Diagram of constructing amiRNA precursor by three-step PCR. I, II, III, IV, V and VI were the six primers. B, Diagram of constructing amiRNA precursor by only one-step PCR. F and R were the two primers. Sequence in red color meant amiRNA, and in blue color meant amiRNA*. Bulge meant unmatched base.

pri-amiRPDS(319)

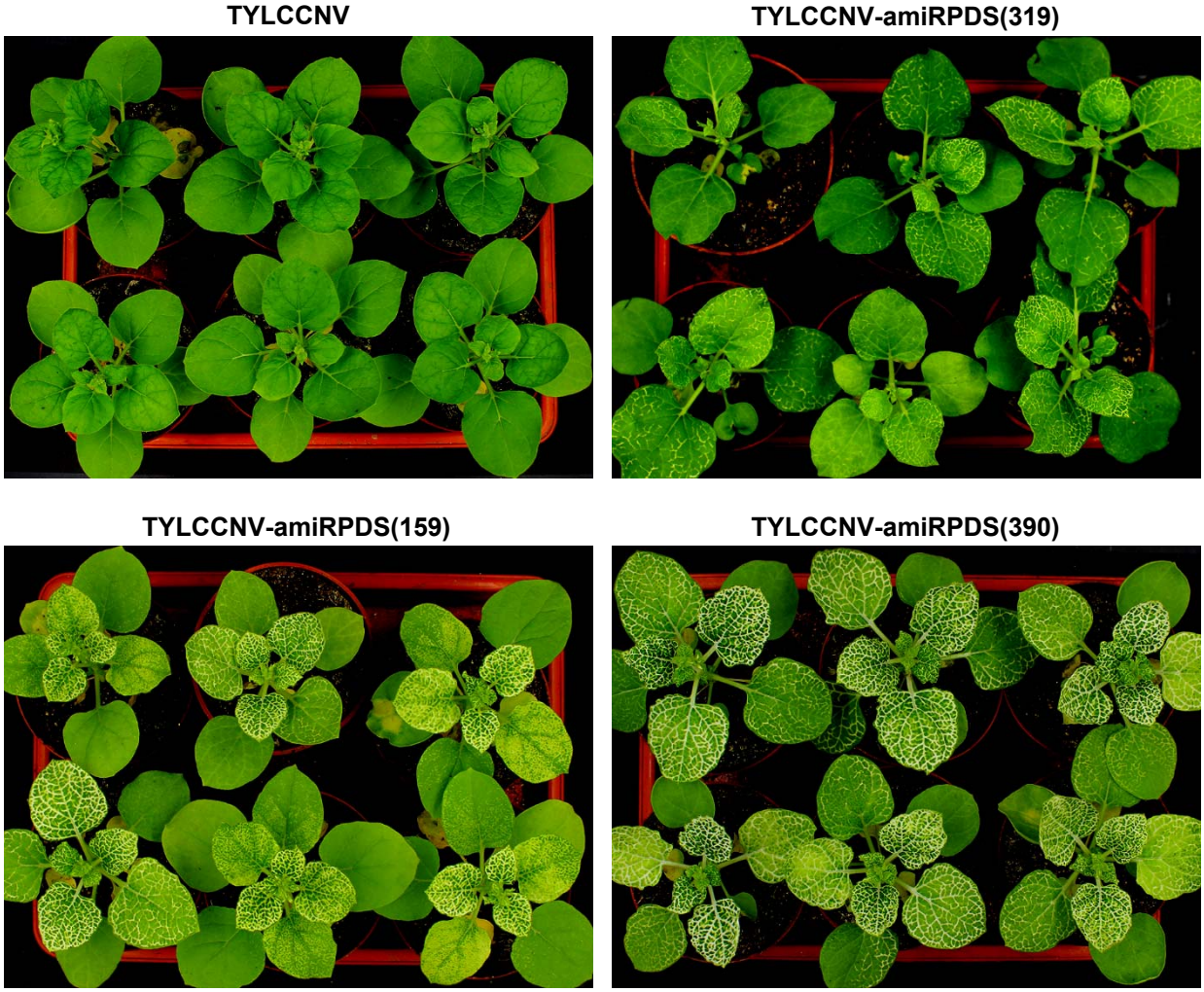


pri-amiRPDS(159)

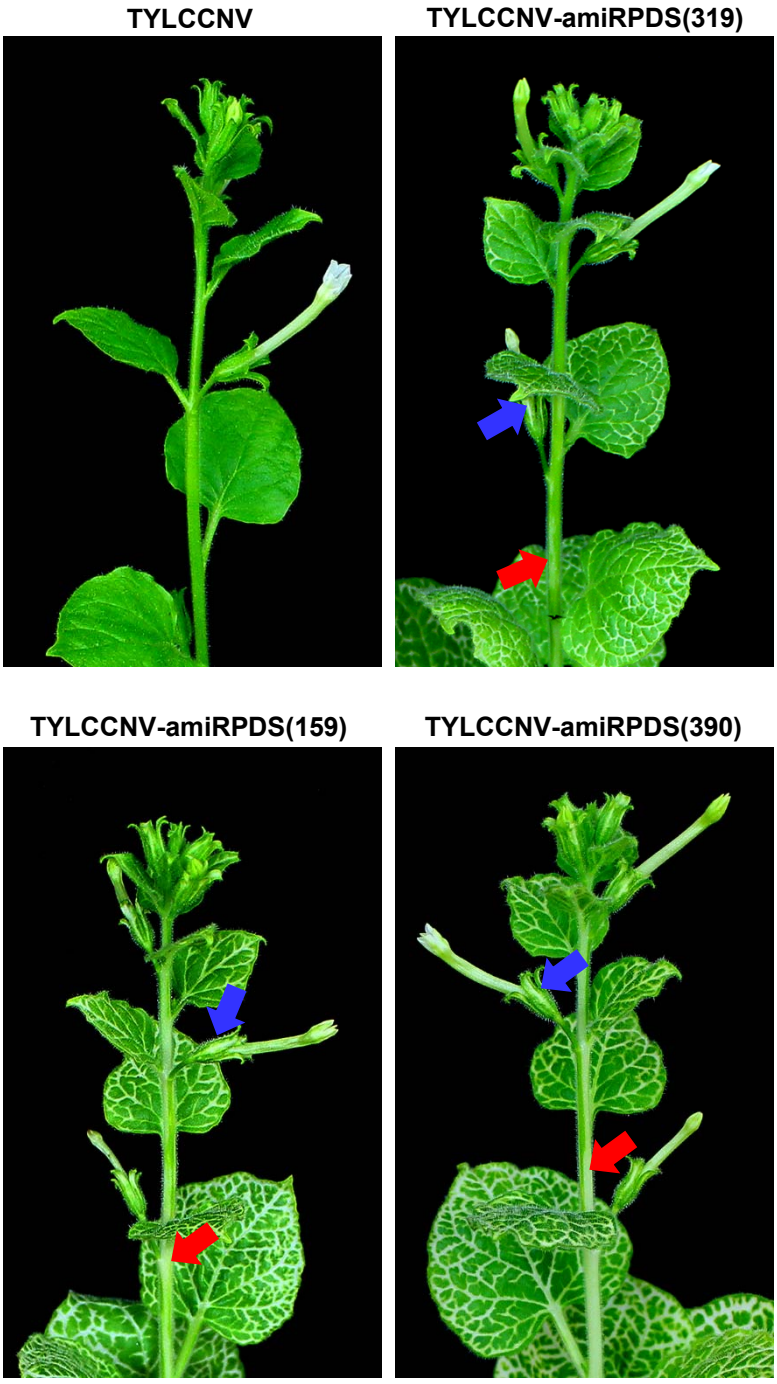


pri-amiRPDS(390)

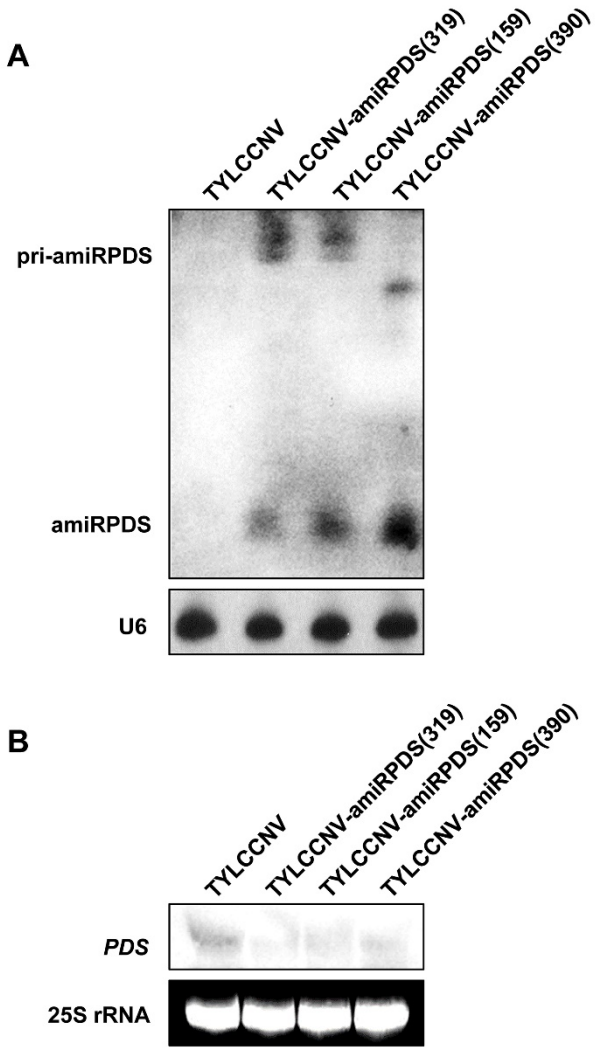
Supplemental Figure S3. Secondary structures of pri-amiRPDS(319), pri-amiRPDS(159), and pri-amiRPDS(390). Sequence in red color meant amiRNA, and in blue color meant amiRNA*. Bulge meant unmatched base.



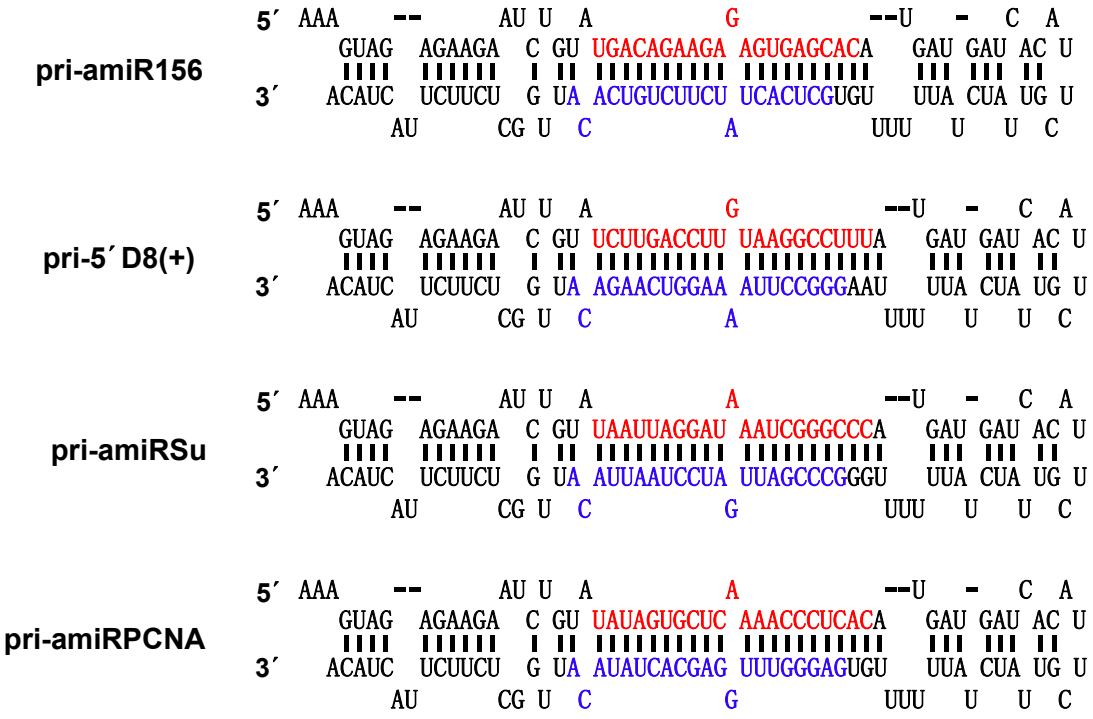
Supplemental Figure S4. Silence of *PDS* by TYLCCNV-amiRPDS vectors in different miRNA backbones in *N. benthamian*. *PDS*-silencing phenotype in *N. benthamiana* plants inoculated with TYLCCNV-amiRPDS(319), TYLCCNV-amiRPDS(159) and TYLCCNV-amiRPDS(390). TYLCCNV empty vector inoculated plants were used as negative control. Photographs were taken at 25 dpi.



Supplemental Figure S5. Phenotype of amiRPDS precursors in different miRNA backbones at 45 dpi. *PDS*-silencing phenotype in *N. benthamiana* plants inoculated with TYLCCNV-amiRPDS(319), TYLCCNV-amiRPDS(159) and TYLCCNV-amiRPDS(390). TYLCCNV empty vector inoculated plants were used as negative control. Photographs were taken at 45 dpi.

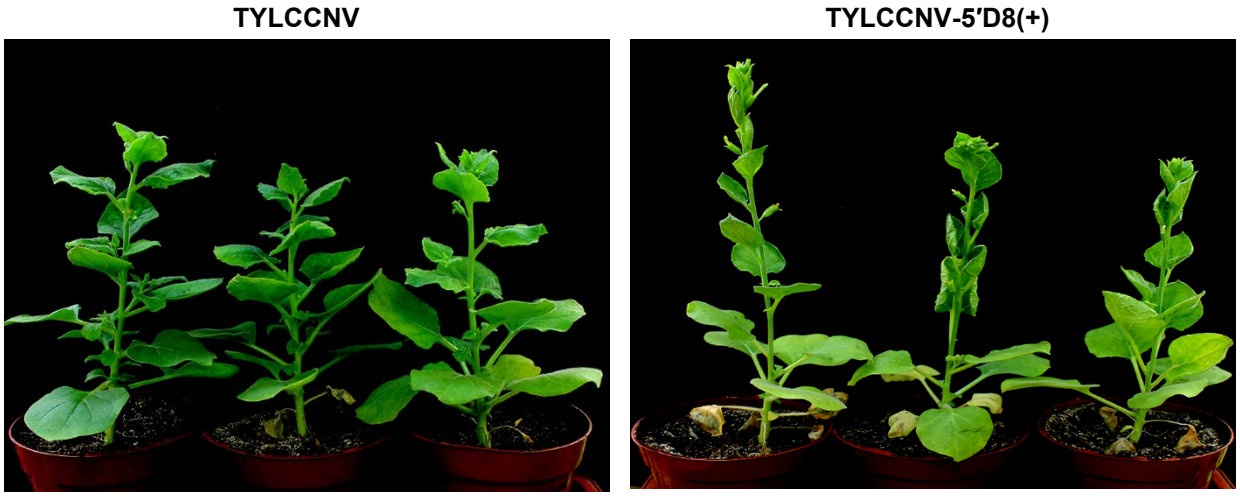


Supplemental Figure S6. Northern blot analysis of amiRPDS, pri-amiRPDS and *PDS* in plants inoculated with TYLCCNV or TYLCCNV-amiRPDS vectors in different miRNA backbones. A, Northern blot assays of amiRPDS and pri-amiRPDS in plants inoculated with TYLCCNV or TYLCCNV-amiRPDS vectors in different miRNA backbones. U6 was used as the loading control. B, Northern blot assays of *PDS* in plants inoculated with TYLCCNV or TYLCCNV-amiRPDS vectors in different miRNA backbones. GelStain (Transgen, Beijing) staining of 25S rRNA was used as the loading control.

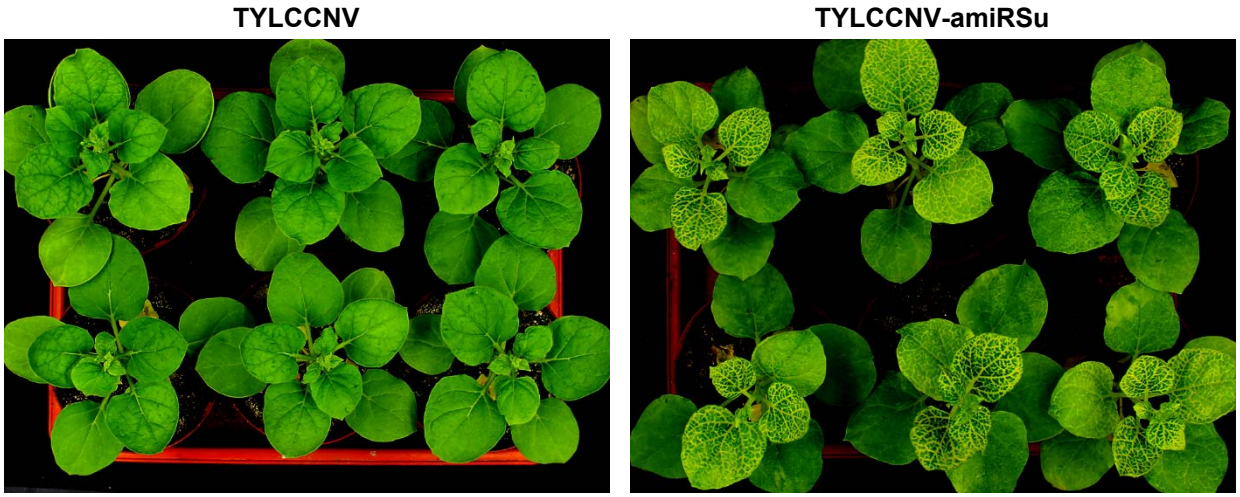


Supplemental Figure S7. Secondary structures of pri-amiR156, pri-5′D8(+), pri-amiRSu, and amiRPCNA. Sequence in red color meant amiRNA, and in blue color meant amiRNA*. Bulge meant unmatched base.

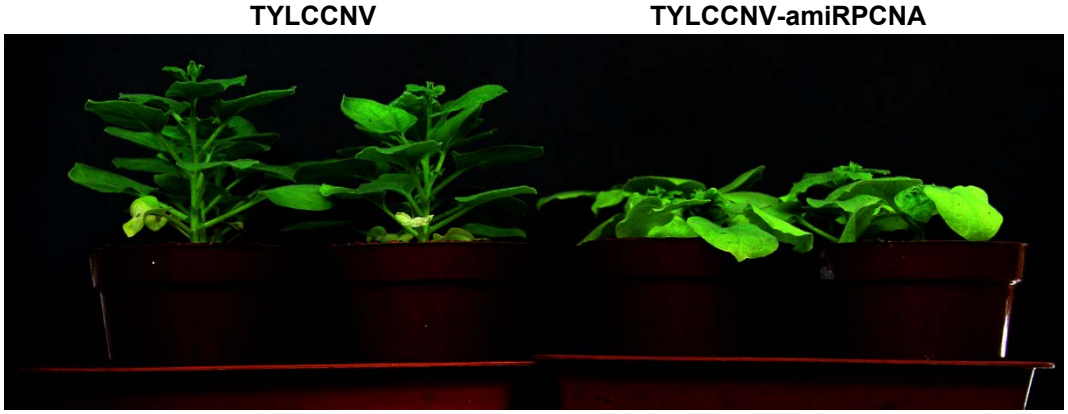
Supplemental Figure S8. Overexpression of miR156 by TYLCCNV-amiR156 in *N. benthamiana.* The phenotype of overexpressing miR156 in *N. benthamiana* plants inoculated with TYLCCNV-amiR156. TYLCCNV empty vector inoculated plants were used as negative control. Photographs were taken at 14 dpi.



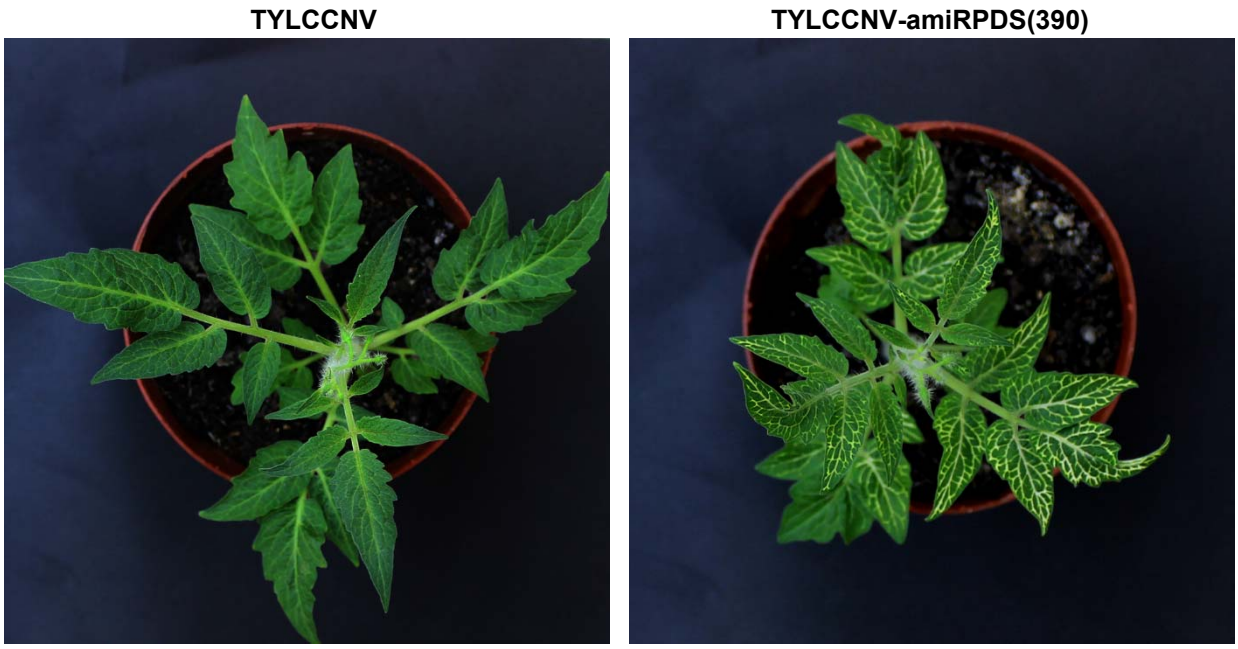
Supplemental Figure S9. Overexpression of 5′ D8(+) by TYLCCNV-5′ D8(+) in *N. benthamiana*. The phenotype of overexpressing 5′D8(+) in *N. benthamiana* plants inoculated with TYLCCNV-5′ D8(+). TYLCCNV empty vector inoculated plants were used as negative control. Photographs were taken at 30 dpi.



Supplemental Figure S10. Silence of *Su* by TYLCCNV-amiRSu in *N. benthamiana*. *Su*-silencing phenotype in *N. benthamiana* plants inoculated with TYLCCNV-amiRSu. TYLCCNV empty vector inoculated plants were used as negative control. Photographs were taken at 25 dpi.



Supplemental Figure S11. Silence of *PCNA* by TYLCCNV-amiRPCNA in *N. benthamiana*. *PCNA*-silencing phenotype in *N. benthamiana* plants inoculated with TYLCCNV-amiRPCNA. TYLCCNV empty vector inoculated plants were used as negative control. Photographs were taken at 25 dpi.



Supplemental Figure S12. *PDS*-silencing phenotype in tomato plants inoculated with TYLCCNV-amiRPDS(390). TYLCCNV empty vector inoculated plants were used as negative control. Photographs were taken at 4 weeks post infiltration.