

Table S3 Grading criteria for TMV infection in peppers

Disease level	Symptom
0	Not showing any symptoms
1	Small and withered spots appear on the inoculated leaves
3	Leaves shed after inoculation, and small necrotic spots appear on the stem
5	Most leaves exhibit mosaic, while a few have deformities or shrinkage
7	Most leaves of the plant show shrinkage, deformation, severe mosaic, and the plant is stunted
9	During severe mosaic conditions, plants exhibit significant dwarfing and systemic necrosis