

Disease Notes

First Report of *Tomato chlorosis virus* in Israel

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During December 2003, symptoms were observed in greenhouse tomato plants in Bet Dagan, Israel that resembled those of *Tomato chlorosis virus* (ToCV), a crinivirus common in the southeastern United States and southern Europe (2,3). Middle-aged leaves showed interveinal chlorosis, while more mature leaves showed more intense interveinal chlorosis with some interveinal bronzing. Symptoms were associated with the presence of *Bemisia tabaci*, an efficient vector of ToCV. Total nucleic acids were extracted (1) from middle-aged and mature leaves from two symptomatic plants, as well as from healthy tomato, *Physalis wrightii* infected with ToCV, and *Nicotiana benthamiana* infected with *Tomato infectious chlorosis virus* (TICV), another crinivirus that produces identical symptoms on tomato. Extracts were tested using hybridization with probes specific to the coat protein (*CP*) gene of ToCV and the *HSP70h* gene of TICV. Hybridization results identified the presence of ToCV in all samples from symptomatic tomato plants and ToCV-infected *P. wrightii*, but not in those from healthy tomato or TICV-infected *N. benthamiana*. TICV was only detected in TICV-infected *N. benthamiana*. Extracts were also subjected to reverse transcription-polymerase chain reaction using primers specific to the *CP* gene of ToCV (GenBank Accession No. AY444872; Forward primer: 5' ATGGAGAACAGT GCCGTTGC 3'; Reverse Primer: 5' TTAGCAACCAGTTATCGATGC 3'). All samples from symptomatic tomato and ToCV-infected *P. wrightii* produced amplicons of the expected size, but no amplicons were produced from extracts of healthy tomato. Laboratory results and observed symptoms confirm the presence of ToCV in symptomatic tomatoes. To our knowledge, this is the first report of ToCV in Israel.

References: (1) S. Dellaporta et al. *Plant Mol. Biol. Rep.* 1:19, 1983. (2) J. Navas-Castillo et al. *Plant Dis.* 84:835, 2000. (3) G. C. Wisler et al. *Phytopathology* 88:402, 1998.