Tomato Infectious Chlorosis Virus Causes Leaf Yellowing and Reddening of Tomato in Italy

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Since autumn 2000, severe and widespread chlorosis, sometimes associated with redness, has been observed in greenhouse tomatoes in different regions of Italy. A total of 104 samples were analyzed for tomato infectious chlorosis virus (TICV), by a one-step RT-PCR procedure. In some areas of central Italy and Sardinia, the symptom was consistently correlated with the presence of TICV. The RT-PCR procedure enabled rapid and reliable detection of TICV from field samples. Sequence analysis of the amplified 501-bp fragment, part of the HSP70 coding region, revealed an identity of 99% with the TICV sequence in the GenBank database. A digoxigenin-labeled DNA probe was also produced and successfully tested in dot blot assays. This is the first report of TICV causing epidemics in Europe.
KEY WORDS: Closteroviridae; crinivirus; tomato infectious chlorosis virus; TICV; tomato; whiteflies.

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