

DISEASE NOTE

FIRST REPORT OF TOMATO LEAF CURL
NEW DELHI VIRUS ON TOMATO CROP
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In March 2017, severe infections of tomato were observed in heated plastic tunnels in the South of Tunisia. Symptoms consisted of chlorotic mottling and vein distortion on middle leaves, as well as severe leaf curling and stunting. Based on the symptoms and the presence of *Bemisia tabaci*, a begomovirus infection was suspected. Genomic DNA was purified from leaf samples of six symptomatic and two asymptomatic tomato plants and used in PCR to identify tomato yellow leaf curl virus (TYLCV), tomato yellow leaf curl Sardinia virus (TYLCSV) or recombinant species with the amplification of fragments *ca.* 570bp for TYLCV and Rec A, and *ca.* 800bp for TYLCSV and Rec B (Davino *et al.*, 2008). Two of six tomato samples resulted infected with TYLCV Rec A. To identify the virus species present in PCR-negative samples, PCR was performed using specific primers MA2061 and MA2062 for tomato leaf curl New Delhi virus (ToLCNDV) (Ruiz *et al.*, 2015). An amplicon of approximately 890bp was obtained from four tomato samples tested, but not from symptomless plants. Sequencing two PCR amplicons showed 99.9% nucleotide sequences identity. The ToLCNDV nucleotide sequences (GenBank accession Nos. MF784758 and MF784759) shared 99.7 to 99.5% nucleotide identity with partial nuclear shuttle protein gene sequences of ToLCNDV from zucchini and tomato in Spain respectively (KF749227 and KM977734). ToLCNDV, a bipartite begomovirus, was first reported on Solanaceae and Cucurbitaceae crops in India and neighboring countries, and more recently on zucchini and tomato in Spain (Ju rez *et al.*, 2014; Ruiz *et al.*, 2015), and on cucurbits in Tunisia (Mnari-Hattab *et al.*, 2015). To the best of our knowledge, this is the first report of ToLCNDV on tomato in Tunisia.

Davino S., Davino M., Accotto G.P., 2008. A single-tube PCR assay for detecting viruses and their recombinants that cause tomato yellow leaf curl disease in the Mediterranean basin. *Journal of Virological Methods* **147**: 93-98.

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Ruiz M.L., Sim n A., Velasco L., Garc a M.C., Janssen D. 2015. First report of Tomato leaf curl New Delhi virus infecting tomato in Spain. *Plant Disease* **99**: 894

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DISEASE NOTE

FIRST REPORT OF SOYBEAN MOSAIC
VIRUS INFECTING PASSION FRUIT IN
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Passion fruit (*Passiflora edulis*, family Passifloraceae) is widely cultivated in Ecuador. In September 2015, mottling and downward curling of the leaves were observed in Quevedo (Los R os, Ecuador). Based on the type of symptoms, infection by a potyvirus was suspected. Six symptomatic and symptomless passion fruit samples were screened by DAS-ELISA using specific antibodies (Agdia, USA) to soybean mosaic virus (SMV), a member of the genus *Potyvirus*, family *Potyviridae*. All symptomatic samples were ELISA-positive. Total RNA was isolated from a single plant with Triazol (Sigma, USA) and used in RT-PCR to amplify a DNA fragment of *ca.* 350bp with universal primers designed in the potyviral NIb domain (Zheng *et al.*, 2008). The amplicon was sequenced and the 322bp sequence (GenBank accession No. MF370353) was analysed by BLAST and compared with the corresponding sequence of SMV isolates from different countries. The partial NIb gene sequence of isolate SMV-Ecuador showed a 98.1% and 95% maximum identity at the nucleotide and amino acid levels with a SMV isolate from China (KP710874). A phylogenetic tree constructed with MEGA version 4.1 showed that the SMV isolate from Ecuador was closely related to and clustered with the Chinese isolate KP710874, whereas isolates from Canada (HQ166265), South Korea (FJ807700 and FJ640955), China (KX834323) and Iran (KF297335) formed a separate cluster. To the best of our knowledge, this is the first report of SMV on passion fruit in Ecuador.

Zheng L., Wayper P.J., Gibbs A.J., Fourment M., Rodoni B.C., Gibbs M.J., 2008. Accumulating variation at conserved sites in potyvirus genomes is driven by species discovery and affects degenerate primer design. *PLoS ONE* **3**: e186.

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