DISEASE NOTE

FIRE BLIGHT:
FIRST REPORT IN LATIUM, ITALY

N. Pucci, A. L’Aurora and S. Loreti
C.R.A., Centro di Ricerca per la Patologia Vegetale, Via C.G. Bertero 22, 00156 Roma, Italy

Fire blight, caused by Erwinia amylovora, a major pathogen of pome fruits and many ornamentals, included in the EPPO A2 list of quarantine organism, was detected in 1990 in the main pome fruit-growing areas of Italy, including Emilia-Romagna where, since 1994, it spread rapidly causing epidemic outbreaks in 1997-1998. In October 2012, during the official monitoring made by the regional Plant Protection Service (PPS), a sample was collected in a nursery in Viterbo province (Latium, central Italy) from a quince plant showing shoot tips withered in the typical 'shepherd’s crook', blackish-brown discoloration of the cortex which, when removed, disclosed the typical red streaks. Following isolation on nutrient sucrose agar (NSA) levan-positive colonies were obtained and purified. The bacterial isolates did not produce fluorescent pigment on CSGA, induced hypersensitive response in tobacco leaves and were oxidase-negative. One isolate (CRA-PAV 1751) was lyophilized and conserved. Specific PCR protocols (Bereswill et al., 1992; Llop et al., 2000; Taylor et al., 2001) yielded amplicons of the expected size. Rep-PCR (using BOX andERIC primers) fingerprinting pattern was similar to that of the reference strain OMP-BO 1077/7. Pathogenicity tests on immature pear fruits and re-isolation were performed successfully. This is the first report of E. amylovora from Latium, which was declared as “protected zone” by EU Directive 2000/29/EC. Following our finding, the regional PPS has adopted all the measures required by the Ministerial Decree 10/9/99 No. 356, to restrain the spread of the pathogen. This highlights the importance of healthy nursery productions, especially for propagules like E. amylovora for which prevention is the main control strategy, given that no effective chemical or integrated control methods are available.


Corresponding author: N. Pucci
Fax: +390682070249
E-mail: nicoletta.pucci@entecra.it
Received March 7, 2013
Accepted March 14, 2013

DISEASE NOTE

OCURRENCE OF FIG LEAF MOTTLE-ASSOCIATED VIRUS 2 IN IRAN

S. Danesh-Amuz1, F. Rakhshandehroo1, S. Rezaee1 and T. Elbeaino2
1Department of Plant Pathology, College of Agriculture and Natural Resources, Science and Research Branch, Islamic Azad university, P.O. Box. 14515-775, Tehran, Iran
2Istituto Agronomico Mediterraneo, Via Ceglie 9, 70010 Valenzano (BA), Italy

Fig mosaic disease (FMD) is prevalent in production fig orchards in Iran (Shahmirzaee et al., 2012). Fig leaf mottle-associated virus 2 (FLMaV-2) is a putative member of the family Closteroviridae that has been found in FMD-affected fig plants in the Mediterranean basin (Elbeaino et al., 2009). During a survey of fig plantations in Mazandaran province in the North of Iran in 2012, plenty of FMD symptoms such as foliar mosaic, chlorosis, line patterns and malformations were observed. Mechanical inoculations of crude sap from symptomatic fig leaves extracted in 0.1 M phosphate buffer, pH 7.2, containing 0.01% Na2SO3 were done on Cucumis sativus, Chenopodium quinoa, Gomphrena globosa, Nicotiana tabacum cv. Samsun and Vigna unguiculata but none of these hosts showed symptoms. To determine the presence of FLMaV-2, 20 symptomatic fig leaf samples were randomly collected and tested by RT-PCR using total RNA isolated with the GFR-100 RNA Isolation Kit (Vivantis, Malaysia) and specific primers (F3-s: 5'-GAACAGTGCTATCAGTTTGATTG-3'; F3-a: 5'-TCCACCTCTCTGGAGAAGTAGAA-3') designed on the heat shock protein 70 homologue (HSP70h) gene (Elbeaino et al., 2007). A HSP70h DNA fragment of the expected size (360 bp) was amplified from one sample and directly sequenced. A BLAST analysis of the FLMaV-2 sequence (GenBank accession No. KC534878) showed 99-100% and 86-99% identity at the nucleotide and amino acid levels, respectively, with comparable sequences of other FLMaV-2 isolates (GenBank accession Nos. FJ473383, FN687742, FN687747 and FN687749). This is the first report of FLMaV-2 in Iran.


Corresponding author: F. Rakhshandehroo
Fax: +98.21.44865474
E-mail: rakhshandehroo_fa@srbiau.ac.ir
Received March 21, 2013
Accepted April 2, 2013