

DISEASE NOTE

FIRST REPORT OF PERSIMMON CRYPTIC VIRUS IN SPAIN

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Japanese persimmon (*Dyospiros kaki*) is an emerging crop in the Mediterranean area of Spain. Up to date only three viroids and three viruses (*Citrus viroid VI*, Apple fruit crinkle viroid, Persimmon viroid, Persimmon virus A, Persimmon latent virus and Persimmon cryptic virus) have been described to infect this crop. In spring 2015, a persimmon sample from Algemesí (Ribera del Xúquer) showing interveinal chlorosis and necrosis of leaves was analyzed by next generation sequencing of siRNAs using Illumina technology. A total of 1415 contigs were assembled *de novo* by Velvet and analyzed by Blastn and TBlastx. Only seven contigs were related to a plant viral sequence, corresponding to Persimmon cryptic virus (PeCV), a putative member of the genus *Deltapartitivirus*, family *Partitiviridae*. This virus was first identified in Apulia (Italy), showing necrosis of the veinlets on leaves (Morelli *et al.*, 2015) and it has been recently reported in Turkey (Morelli and Arli-Sokmen, 2016). Five persimmon symptomatic and five symptomless samples from the same growing area were analyzed by RT-PCR using the specific primers CryKaF 5'-AGCTCCACGACCGATTGTGC-3' and CryNeR 5'-ACGAAGACACGTAACACGCAGTGG-3' (Morelli *et al.*, 2015). Two fragments of 608 and 593 bp, corresponding to the RNA-dependent RNA polymerase and the coat protein, respectively, were successfully amplified in 9 of these samples. The nucleotide sequences (GenBank accession Nos. KX352443 and KX352444) were identical in all Spanish samples and shared an identity percentage of 99.8 and 99.2% with the RdRp and the CP of the Italian isolate. Although no other virus has been detected in Spanish persimmon trees, the fact that the cryptic virus is present in both symptomatic and asymptomatic plants questions its association with the observed symptomatology. This is the first report of Persimmon cryptic virus in Spain.

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Received July 1, 2016
Accepted November 2, 2016

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FIRST REPORT OF ANTHRACNOSE ON WAX APPLE IN MALAYSIA CAUSED BY *COLLETOTRICHUM GLOEOSPORIOIDES*J.R. Al-Obaidi¹ N. Mohd Hanafi¹ and T.H. Hong²¹Agro-Biotechnology Institute Malaysia (ABI), c/o MARDI Headquarters, 43400, Serdang, Selangor, Malaysia²School of Biosciences, Taylor's University, No. 1 Jalan Taylor's, 47500, Subang Jaya, Selangor Darul Ehsan, Malaysia

The rose/wax apple (*Syzygium samarangense*) is a tropical fruit native to Southeast Asia (Morton and Dowling, 1987). In Malaysia, fresh wax apples are produced for local consumption, with a cultivated area of ca. 3300 ha, and value of >9 Million USD/year. However, due to fruit rot disease, about 30% of the product is lost annually, with high economic damage for smallholders. In February 2016, anthracnose symptoms with dark, sunken, circular lesion on the ripening fruits were observed on wax apples in many farms in Johor, Malaysia. To identify the causing agent, infected fruit tissues (ca. 5 mm²) were surface sterilized with 1.5 % sodium hypochlorite followed by 70% ethanol, rinsed with sterile distilled water (SDA) and plated on potato dextrose agar (PDA). PDA plates were incubated at 25°C, 50% relative humidity for 14 days, becoming white at first and then light grayish to brown. The fungus was identified as *Colletotrichum gloeosporioides* based on morphological characterization (Sutton, 1992). Conidia were 15.3 to 19×3.0 to 5.4 µm in size, curved, cylindrical rounded in both side. For molecular identification, internal transcribed spacer (ITS) region using ITS1 and ITS4 primers, and pectate lyase (PEL) using Cg-pecf and Cg-pecr primers (Shi *et al.*, 2008) were amplified by PCR and sequenced. The sequences (GenBank accession No. KX161701 for ITS and KX161702 for PEL, respectively) showed 99% similarity with *C. gloeosporioides* ITS (HQ874882, KJ668576, KF053199), and 100% and 99% similarity with *C. gloeosporioides* PEL (ADD17352, DQ062673) sequences. Isolate ABI-JJ1 was used for pathogenicity test: detached fruits were surface sterilized with 6% sodium hypochlorite for ca. 3-5 min and rinsed with SDA. Mycelial *C. gloeosporioides* agar plugs (ca. 5 mm²) were placed on wounded fruits. Fruits were placed in plastic boxes and incubated at 25°C and 50% relative humidity for 15 days. Control fruits were inoculated with sterile PDA plugs and SDA. Small dark lesions, similar to those observed in the field, started to appear on all inoculated fruits 3 days after inoculation. Control fruits remained symptomless. To the best of our knowledge, this is the first report of *C. gloeosporioides* causing anthracnose on wax apple in Malaysia.

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Received July 25, 2016
Accepted November 22, 2016