FIRST REPORT OF COLLETOTRICHUM KAHAWAE subsp. CIGGARO ON MANDARIN IN ITALY

G. Perrone¹, D. Magistà¹ and A.M. Ismail²

¹Istituto di Scienze delle Produzioni Alimentari, Via Amendola 122/O, 70126 Bari, Italy
²Plant Pathology Research Institute, Agricultural Research Centre, 12619 Giza, Egypt

In May 2015, symptoms of light brown necrotic lesions were observed on mandarin (Citrus reticulata) leaves in Calabria region in southern Italy. The fruiting bodies (acervuli) of the fungus appeared on the necrotic tissues. Isolation was made on potato dextrose agar (PDA) from small sections (3-5 mm²) of lesions margins after surface disinfection in 1% NaOCl. The isolated fungus developed cottony, grey with aerial mycelium with stromatic acervuli producing orange masses of conidia. Conidia were hyaline, cylindrical tapering slightly from only one side measuring 16-20 × 3.5-5.5 μm. These morphological criteria matched those of Colletotrichum kahawae clade (Weir et al., 2012). Fungal identity at species level was further confirmed by amplification and sequencing of the beta-tubulin (TUB), partial histone 3 (HIS3) and internal transcribed spacer (ITS) region of ribosomal DNA (rDNA) gene regions as described by Damm et al. (2012). The TUB sequence (GenBank accession No. KU605630) shared 100% homology with the TUB sequence of C. kahawae subsp. ciggaro (KC297082). The sequences of HIS3 (KU605631) and ITS (KU605632) were 100% homologous with KC297048 and GU174550, respectively. The isolated fungus was tested for pathogenicity on detached mandarin leaves. A 5-mm² mycelial plugs were applied on the wounded leaves and kept for 7 days at 25°C under high relative humidity (RH). Symptoms developed were similar to those observed on the trees. Re-isolation revealed the same morphology of the original isolate. To our knowledge this is the first report of C. kahawae subsp. ciggaro on mandarin in Italy.


FIRST REPORT OF VERTICILLIUM DAHLIAE CAUSING VERTICILLIUM WILT ON GOJI BERRY IN TURKEY

G. Özer¹ and H. Bayraktar²

¹Abant Izzet Baysal University, Faculty of Agriculture and Natural Sciences, Department of Plant Protection, Bolu 14020, Turkey
²Ankara University, Faculty of Agriculture, Department of Plant Protection, Ankara 06110, Turkey

Wilt symptoms of Goji berry plant (Lycium barbarum) were observed in nurseries in Bolu (Turkey) during a sanitary survey conducted in May 2015. One-year-old plants showed symptoms of wilting, stunting, yellowing, defoliation and vascular discoloration in the roots and stems. Small pieces of brownish vascular tissues were placed onto potato dextrose agar (PDA) after surface-disinfecting with 1% sodium hypochlorite. After 10 days of incubation at 25±1°C and 12 h photoperiod, many colonies developed with hyaline hyphae and irregular shaped black microsclerotia. The identification of fungal isolates was performed on the basis of morphological features such as elliptical single-celled conidia, verticillate conidiophores and microsclerotia (Hawksworth and Talboys, 1970). To confirm identity of the causal fungus, Verticillium dahliae, the internal transcribed spacer (ITS) region of rDNA was amplified for representative isolate using the primers ITS1/ITS4 (White et al., 1990) and sequenced (GenBank accession No. KX017569). BLASTn analysis of the 542 bp amplicon revealed 100% sequence identity with the sequence of a V. dahliae strain (AF104926). To fulfil Koch’s postulates, 8-month-old Goji berry plants were inoculated by roots immersion into a conidial suspension (10⁷ conidia/ml) for 30 min. Control plants were submerged in sterile tap water. All plants were transplanted into pots containing 1 l autoclaved soil and kept in a glasshouse. After 60 days, infected plants showed typical Verticillium wilt symptoms in the roots and stems, from which V. dahliae was consistently reisolated. To our knowledge, this is the first report of Goji berry Verticillium wilt disease in Turkey.


Corresponding author: A.M. Ismail
E-mail: ma.ah.ismail@gmail.com

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Corresponding author: G. Özer
E-mail: gokozer@gmail.com

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