Disease Note

FIRST REPORT OF STEM ROT CAUSED BY *FUSARIUM OXYSPORUM* f. sp. *OPUNTIARUM* ON *MAMMILLARIA ZEILMANNIANA* IN ITALY

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During October 2014, in a nursery of Vallecrosia (Imperia province, Northern Italy), 2,000 plants of *M. zeilmanniana* showed symptoms of a stem rot that started from the collar. As the disease progressed, stems dried and eventually collapsed. In addition, the roots were rotted. A fungus was isolated from symptomatic stem tissues. On carnation leaf agar (CLA), isolates produced short monophialides with unicellular, oval to elliptical microconidia measuring 6.1-8.5 × 2.3-3.2 (mean 7.2 × 2.8) µm, and chlamydospores and macroconidia. The first were rough walled, intercalary, singles or in pairs or clumps and measured 6-9 µm in diameter. Macroconidia were slightly falcate, septate, measured 31.4-56.8×2.8-4.0 (mean: 42.7 × 3.5) µm and were characterized by a foot-shaped basal cell and a short apical cell. Such characteristics are typical of *Fusarium oxysporum* (Leslie and Summerell, 2006). DNA was extracted from a single-spore culture (isolate DB14OTT12M1). The elongation factor 1 alpha gene (*EF1α*) was amplified using primers EF1/EF2 (O'Donnell *et al*., 1998), obtaining a 413 bp amplicon (GenBank Accession No. KT183486). BLASTn analysis showed a 99% homology with the sequence of *F. oxysporum* JF740824. Furthermore, the amplification of IGS region with the primers CNS1 and CNL12 and a multialignment of both primers with several *formae speciales* of *F. oxysporum* listed in GenBank permitted to include the isolate from *M. zeilmanniana* into the *F. oxysporum* f. sp. *opuntiarum* clade. Symptoms of the disease were reproduced on three healthy plants of *M. zeilmanniana* artificially inoculated following the method described by Talgø and Stensvand (2013). *F. oxysporum* was constantly re-isolated from inoculated stems. Controls remained symptomless. This is the first report of *F. oxysporum* f. sp. *opuntiarum* on *M. zeilmanniana* in Italy, and potentially in Europe.

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Disease Note

FIRST REPORT OF *NECTRIA HAEMATOCOCCA* ASSOCIATED WITH DIEBACK OF OLIVE TREES IN TUNISIA

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During a routine survey for olive diseases conducted in autumn 2013 in southern Tunisia (Bir Ali region), wilting and chlorosis of the leaves accompanied by brown-to-black discoloration of the wood in cross-sectioned twigs were observed on 3- to 10-year-old olive trees. On potato dextrose agar (PDA), a fungus was isolated from symptomatic twigs and branches with an initially white mycelium that over time became light gray-brown. This fungus was identified as *Nectria* sp. based on morphological characteristics and analysis of the ITS gene region (White *et al*., 1990). A BLAST search of GenBank database revealed 99% homology of the amplified product with a reference sequence of *Nectria haematococca* (strain HLJ_14, accession No. JN088237.1). Pathogenicity tests were conducted on 10 two-year old olive trees of cv. Chemlali, by placing a mycelial plug in a shallow wound on the stem of each plant. Control plants were inoculated with sterile PDA plugs. Two months post inoculation, symptoms appeared, with stems showing brown discolorations and necrotic lesions. Controls remained healthy. *N. haematococca* was recovered from necrotic lesions, thus fulfilling Koch's postulates. *N. haematococca* was held responsible for root rot of olive trees in Argentina (Barreto *et al*., 2003). To our knowledge this is the first report of *N. haematococca* as a causal agent of dieback of olive trees in Tunisia.

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