FIRST REPORT OF NEONECTRIA RADICICOLA ASSOCIATED WITH ROOT ROT DISEASE OF OLIVE IN TUNISIA

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Olive (Olea europaea) is an economically important crop in Tunisia. During surveys of olive diseases conducted in 2013 in Tunisia, symptoms of leaf wilting and chlorosis, Brown-to-black discoloration of the wood in cross-sections of the stems and necrotic lesions in the roots were observed on young olive trees. Isolation of the pathogen was performed from 15 infected root and stem samples plated onto PDA medium amended with 50 µg ml⁻¹ of streptomycin sulfate. Fungal colonies were then cultured on synthetic nutrient-poor agar medium. All isolates were identified as Cylindrocarpon sp. based on colony morphology and conidial characteristics (Booth, 1966). The isolates developed abundant floccose mycelium, which varied in color from brown-yellow to sepia. All isolates produced only macroconidia, which were hyaline, straight, and predominantly three-septate measuring 15.75 to 29.50 µm × 3.25 to 4.75 µm. Identity of these isolates was confirmed by sequencing the internal transcribed spacer region, which was amplified using primer pair ITS1 and ITS4 (White et al., 1990). The ITS sequences were deposited in GenBank (KM503139). These sequences revealed 98% genetic identity with those of Neonectria radicicola the anamorphic form of Cylindrocarpon species available in GenBank. Pathogenicity of N. radicicola in olive cv. Chemlali was evaluated using three isolates. Three months after inoculation, the inoculated plants developed wilting and root symptoms similar to those observed in the field. N. radicicola was recovered from all the symptomatic plants. This is the first report of N. radicicola causing root rot of olive in Tunisia, which may potentially affect the sustainability of olive nurseries.
