



First report of crown and root rot of tomato caused by *Fusarium equiseti* in Algeria

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Tomato (*Solanum lycopersicum* L.) is a socio-economically important crop in Algeria. From 2013 to 2016, surveys were performed on tomato plants showing symptoms of crown and root rot in North Algeria in Tlemcen, Oran, Mostaganem, Guelma and Sekikda Departments (disease incidence 62%). *Fusarium* isolates were recovered from surface-disinfected roots and stem collars of symptomatic plants, and cultivated on peptone pentachloronitrobenzene (PCNB) agar (Leslie and Summerell 2006). The aerial mycelium was white to brown with abundant macroconidia 5 to 7 septate (1.5 to 2.5 μm in width, and 75 to 100 μm in length), terminal and intercalary chlamydospores or in chains. No microconidia were observed. Nine monosporic cultures were identified morphologically as *Fusarium equiseti* (Corda) Saccardo (Jacobs et al. 2018). Identification of isolates was confirmed by DNA sequencing of the Translation Elongation Factor – 1 alpha (TEF1- α) gene, using EF1 and EF2 primers. Sequences of the isolates (GenBank Accession Nos. MG017430 to MG017438) against *Fusarium* MLST database showed similarity ranging from 98% to 100% with *Fusarium incarnatum-equiseti* species complex MLST type 5 (GQ505672 and GQ505597)

(O'Donnell et al. 2015). Pathogenicity of each isolate was evaluated on ten 12-day-old seedlings of tomato cv. Monfavet 63.5 by cutting the roots 7 mm below the crown and dipping the plants for 5 min in 5 ml of 10^6 conidia ml^{-1} suspension in Minimal Liquid Medium (MLM). Ten non-inoculated control plants were also included in the experiment. The plants were incubated for four weeks in a greenhouse at room temperature between 20 and 25°C. The average infection percentage for all isolates was 55.2% of plants with crown and root rot symptoms. Control plants remained asymptomatic. *F. equiseti* was re-isolated only from inoculated plants, completing Koch's postulates. To our knowledge, this is the first report of *F. equiseti* as causal agent of crown and root rot of tomato in Algeria.

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