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First Report of *Pythium dissotocum* Affecting Cilantro in Hydroponic Systems in Puerto Rico

G. Romero and **C. Estévez de Jensen**, Crops and Environmental Sciences, University of Puerto Rico, Mayaguez 00680; and **A. J. Palmateer**, Tropical Research & Education Center, University of Florida, Homestead, FL 33031

Corresponding author: G. Romero. gabriela.romero1@upr.edu

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Cilantro (*Coriandrum sativum* L.) comprises 60% of the hydroponic crops grown mainly by cooperatives and family operated businesses in Puerto Rico. Management practices are deficient and this allows frequent outbreaks of root rots. In 2011 in a commercial greenhouse in Adjuntas, cilantro plants showed discoloration of the hypocotyl and browning of the roots. Older plants were stunted with lower leaf chlorosis, softening of the base of the stem, root necrosis, and leaf wilting. Disease incidence in a 12,000-plant bench was over 50%, and severity mean value of 7 on a 1-9 scale (1 being healthy and 9 being dead). Samples were collected at different growth stages from sprouts to 35-day-old plants and a *Pythium* species was consistently isolated from diseased tissue. Isolates produced filamentous and terminal sporangia forming dendroid structures. Oogonia were 16-25.5 × 16.9-25.4 μm, subglobose and terminal. Oospores were 12.2-20.4 × 12.2-20 μm and aplerotic. Antheridia were monoclinal. Two isolates (1271 and 1272) had sequence similarities of 99% to the rDNA ITS region of *Pythium dissotocum* (GenBank number HQ643423.1, [National Center for Biotechnology Information](http://www.ncbi.nlm.nih.gov/GenBank/HQ643423.1)), and their sequences were deposited in GenBank under Accession numbers JQ771186 and JQ771187, respectively. Pathogenicity tests were conducted on cilantro cv. 'Lonestar' and in pea (*Pisum sativum* L.) cv. 'Sugar Baby.' Cilantro and pea seeds were inoculated with 10 g of sterilized millet colonized by *P. dissotocum* isolate 1271. Plants were grown in soil-less mix (PROMIX, Premier Tech Horticulture, Rivière-du-Loup, Québec, Canada). The pathogen reduced growth, turned the lower foliage yellow, and produced root rot and necrotic lesions on the base of stem 15 and 21 days post inoculation in pea and cilantro, respectively. *Pythium dissotocum* was reisolated from both inoculated hosts and identification was confirmed by sequencing the rDNA ITS region. This is the first report of *Pythium dissotocum* on cilantro in Puerto Rico. *Pythium* spp. are common in hydroponic systems, so eliminating sources of *Pythium* contamination, disinfection of tools and decreasing stress conditions to the plant will help reduce disease outbreaks (1).

Literature Cited

1. Herrero, M. L., Hermansen, A., and Elen, O. N. 2003. Occurrence of *Pythium* spp. and *Phytophthora* spp. in Norwegian greenhouses and their pathogenicity on cucumber seedlings. J. Phytopathol. 151:36-41