Plectosphaerella species associated with root and collar rots of horticultural crops in southern Italy

Authors: Carlucci, A.; Raimondo, M.L.; Santos, J.; Phillips, A.J.L.
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Plectosphaerella cucumerina, most frequently encountered in its *Plectosporium* state, is well known as a pathogen of several plant species causing fruit, root and collar rot, and collapse. It is considered to pose a serious threat to melon (*Cucumis melo*) production in Italy. In the present study, an intensive sampling of diseased cucurbits as well as tomato and bell pepper was done and the fungal pathogens present on them were isolated. Phylogenetic relationships of the isolates were determined through a study of ribosomal RNA gene sequences (ITS cluster and D1/D2 domain of the 28S rRNA gene). Combining morphological, culture and molecular data, six species were distinguished. One of these (*Pa. cucumerina*) is already known. Four new species are described as *Plectosphaerella citrullae*, *Pa. pauciseptata*, *Pa. plurivora* and *Pa. ramiseptata*. *Acremonium cucurbitacearum* is shown to be a synonym of *Nodulisporium melonis* and is transferred to *Plectosphaerella* as *Plectosphaerella melonis* comb. nov. A further three known species of *Plectosporium* are recombined in *Plectosphaerella*.

Keywords: D1/D2; ITS LSU; PHYLOGENY; PLECTOSPORIUM; RDNA; SYSTEMATICS; TAXONOMY
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