Diversity of mycobiota associated with onion (Allium cepa L.) cultivated in Assiut, with a newly recorded fungal species to Egypt

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Abstract:

The goal of this study was to characterize diversity of fungal biota in soil, roots and green leaves of onion plant. Seventy-nine fungal species belonging to 32 genera were isolated from soil (29 genera and 72 species), rhizosphere (25 and 52), rhizoplane (24 and 38), phyllosphere (17 and 41) and phylloplane (17 and 35) on PDA medium at 19º and 28ºC. The number of fungal genera and species in soil was higher than those on roots and leaves, while those on the surface of roots (rhizosphere) or leaves (phyllosphere) were higher than those adhering to roots (rhizoplane) or leaves (phylloplane). Aspergillus (A. niger and A. terreus), followed by Penicillium (P. funiculosum and P. chrysogenum), Rhizopus (R. stolonifer) and Fusarium (F. oxysporum) were the most common fungi. A new record species is reported for the first time to Egypt namely, Zopfiella latipes (from phylloplane of onion).

Keywords:

Soil, onion, Allium cepa, rhizosphere, rhizoplane, phyllosphere, phylloplane, Zopfiella latipes

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