IN VITRO STUDIES ON THE INTERACTION BETWEEN PATHOGENIC SPECIES OF ALTERNARIA AND SOIL INHABITING SAPROPHYTIC FUNGI

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In this study, the interaction between three species of Alternaria, A. brassicicola, A. dauci and A. radicina and some common saprophytic fungi, Aspergillus flavus, Aspergillus niger, Penicillium sp., Trichoderma harzianum, Trichoderma koningii and Trichoderma loxgibrachiatum was investigated in plate culture with a species of Alternaria and a saprophytic fungus grown together in a potato dextrose agar (PDA) medium. Three systems were adopted: (1) the two fungi inoculated on to the medium at the same time, (2) the fast growing saprophyte inoculated 2 days prior to the introduction of the Alternaria species, and (3) the pathogen allowed to develop for 3 days on the medium before inoculation with the saprophyte. Fungal development was observed after 5-7 days incubation.

Growth retardation of both pathogen and saprophyte was observed with A. brassicicola and A. radicina cultured with all six saprophytes and A. dauci cultured with A. flavus, Penicillium sp. and T. koningii. Inhibition zones, however, were not noticed, but overgrowth of fast growing Trichoderma species occurred with A. brassicicola and A. radicina, and A. flavus with A. brassicicola. In three cases, A. dauci with A. niger, T. harzianum and T. loxgibrachiatum, very slight inhibition zones were observed and the development of both fungi inhibited.

These results indicate that the presence of saprophytic fungi in soil could restrain the rapid multiplication of pathogenic species when introduced to cultivated sites and their beneficial action in keeping disease inducing fungi in check, at least to some extent, needs to be recognised.

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