

Research Article

Efficacy of Microbial Bio-antagonists and Fungicides Against Damping-off Disease of Chilli Caused by *Pythium aphanidermatum* (Edson) Fitz.

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Abstract

Green house experiment was conducted to evaluate the combined effect of five biological antagonists (three fungi, *Trichoderma viride*, *T. harzianum*, *Aspergillus niger* [AN-27] and two bacteria, *Pseudomonas fluorescens*, *Bacillus subtilis*) and five chemical fungicides, Mancozeb 75 WP, Blitox-50 (COC 50% WP), Captan 50 WP, Metalaxyl 35 SD and Ridomil MZ 72 WP (Metalaxyl 8% + Mancozeb 64%) against *Pythium aphanidermatum* (Edson) Fitz., causing pre- and post- emergence damping off disease of nursery seedlings of Chilli. ED₅₀ value was calculated for each fungicide against the pathogen and the fungal bio-antagonists following poisoned food technique. Seed coating with compatible fungicides following soil application of bio-antagonists were applied in green house condition. Best result was obtained in seed coating with Metalaxyl 35 and Ridomil MZ 72 WP along with soil application of *Trichoderma harzianum* or *Pseudomonas fluorescens* or *Trichoderma viride* in reducing the seedling disease as well as in increasing the germination of chilli.

Key words: Damping-off, fungicides, microbial bio-antagonist, *Pythium aphanidermatum*, soil application

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