

MANAGEMENT STUDIES ON TOMATO DAMPING-OFF WITH NATIVE ANTAGONISTS

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Abstract: Plant disease management with bio agents is a non chemical and environmental safe method in agriculture. Tomato damping-off caused by *Pythium aphanidermatum* (Edson) Fitz. is one of the most dreadful diseases. Six isolates of *P. aphanidermatum* were collected from tomato nurseries of different geographical areas in Andhra Pradesh and designated as CTR₁, CTR₂, KDP₁, KDP₂, KNL₁ and KNL₂. Native *Trichoderma harzianum* and *Pseudomonas fluorescens* were isolated from tomato rhizosphere using selective media. These two native bioagents were identified upto species level based on morphological characters. Among the two native antagonists, *T. harzianum* recorded maximum per cent inhibition on all isolates of *P. aphanidermatum*. Maximum inhibition was observed in CTR₂ when *T. harzianum* was used while *P. fluorescens* recorded maximum inhibition on KDP₂ *in vitro*. *In vivo* studies revealed that seed treatment with combination of *T. harzianum* and *P. fluorescens* was found to be effective in controlling pre and post-emergence damping-off.

Keywords: *T. harzianum*; *P. fluorescens*; Tomato Damping – off; *P. aphanidermatum*

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