

EFFICACY OF *POCHONIA CHLAMYDOSPORIA* AND *PAECILOMYCES LILACINUS* AS BIOCONTROL AGENTS OF ROOT-KNOT NEMATODES

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Abstract (C2113)

Management of root-knot nematodes (*Meloidogyne* spp.) using fungi that parasitize eggs and females has been gaining popularity as alternatives or supplements to chemical nematicides. This study was conducted with the aim of screening isolates of *Pochonia chlamydosporia* and *Paecilomyces lilacinus* in managing root-knot nematodes. Efficacy of six isolates (10, 126, 144, 147, 177 and 392) of *P. chlamydosporia* and two isolates (PI-Rothamsted and PI-plus™) of *P. lilacinus* was assessed in laboratory and greenhouse using tomato as a test crop. Isolates 10 and 392 were significantly ($P < 0.001$) more effective in parasitizing nematode eggs compared to other isolates. A significant ($P < 0.001$) reduction, of up to 88%, in the numbers of second-stage juveniles compared to the untreated control was achieved with PI-plus in sterilized and non-sterilized soil and with isolate 10 in non-sterilized soil. Shoot weight was 95% and 69 % higher in plants treated with isolates 392 and 10 respectively, compared to the control in non-sterilized. Therefore, isolates 10 and 392 were most effective at controlling root-knot nematodes compared to the other fungal isolates. It can therefore be concluded that *Pochonia chlamydosporia* and *Paecilomyces lilacinus* have the potential that can be exploited in the management of the plant parasitic nematodes.

Key words: *Pochonia chlamydosporia*, *Paecilomyces lilacinus*, root knot nematode, biological control