



Turkish Journal of Agriculture and Forestry

Turkish Journal

of

Agriculture and Forestry

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Pathogenicity of Paecilomyces spp. to the Glasshouse Whitefly, Trialeurodes vaporariorum, with Some Observations on the Fungal Infection Process

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Abstract: This study was carried out to determine the infection rates of 9 Paecilomyces fumosoroseus isolates and 1 Paecilomyces lilacinus isolate on the glasshouse whitefly (GWF), Trialeurodes vaporariorum. Furthermore, the infection progress of P. fumosoroseus was observed on the insect using light and scanning electron microscopes. Bioassays were carried out on second instar nymphs by the application of a spore suspension of each isolate. The mortality data were recorded 3 and 6 days after the application. The effect of Paecilomyces isolates increased as the incubation time was extended. Seven isolates caused significant mortality to the GWF nymphs. The most virulent isolates, 2658, 4400, 4406, 4408 and 4415, killed over 70% of the inoculated nymphs 6 days after inoculation. The development of infection was monitored on artificially infected nymphs at 12-h intervals. Infection by the fungus on the GWF was similar to those reported for other fungus-insect cases. The results of this study showed that the fungus was pathogenic to T. vaporariorum, rapidly killing its host, and thus further studies are required to determine the potential use of the fungus as a biocontrol agent against GWF in greenhouses.

Key Words: Paecilomyces fumosoroseus, Paecilomyces lilacinus, Entomopathogenic fungus, Trialeurodes vaporariorum, Glasshouse whitefly, biological control

Turk. J. Agric. For., **29**, (2005), 331-340.

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