

Isolation of indigenous strains of *Paecilomyces lilacinus* with antagonistic activity *Meloidogyne incognita*.

ABSTRACT

Ten indigenous isolates of *Paecilomyces lilacinus* (PL), were isolated from two black pepper farms in Sarawak heavily infested with root-knot nematodes (RKN) as an initiative to control RKN problem. All isolates showed varying degree in colonizing female nematodes. In the female nematode bioassay on water agar, both indigenous strains of PL namely PLA, PLB, and a commercial strain, PLM (as positive control) demonstrated highly significant colonization ($>90\%$, $P \leq 0.01$) on female. In egg parasitism test, spore suspension (105 spore/mL) of the strains PLA, PLB and PLM exhibited 78.8%, 66.0% and 73.4% parasitism on eggs, respectively. Meanwhile, hatching of nematode eggs incubated in spore suspension of PLA, PLB and PLM for seven days were significantly reduced; 88-89% of eggs were hatch-inhibited as compared to control (26%). This illustrated both local isolates, PLA and PLB are comparable with PLM as biological control agents for managing RKN infestation on black pepper vines.

Keyword: Isolation; *Meloidogyne incognita*; *Paecilomyces lilacinus*; Biocontrol; Antagonistic; Root-knot nematodes.