

Comparative efficacy of biocontrol agents, organic amendments and pesticides against *Meloidogyne incognita* on tomato cv. K-25

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ABSTRACT : An experiment was conducted under pot conditions to determine the comparative efficacy of native biocontrol agents viz., *Pseudomonas fluorescens* isolate PS-4, *Trichoderma harzianum* isolate TH-H-3 and *T. virens* isolate TV-K-3 @ 0.5×10^9 cfu/kg soil; organic amendment materials viz., neem seed powder @ 250 mg/kg soil and farmyard manure @ 1500 mg/kg soil; pesticides viz., carbofuran @ 33.4 mg/kg soil, topsin-M @ 1.4 mg/kg soil and bavistin @ 2.0 mg/kg soil against *Meloidogyne incognita* @ 1000 J₂/kg soil on plant growth and fruit yield of tomato cv. K-25. Results revealed that all the treatments significantly increased the plant growth and fruit yield of tomato as compared to untreated inoculated plants. Highest plant dry weight (46.0 g/plant) and fruit yield (212.0 g/plant) was obtained in plants treated with carbofuran followed by neem seed powder, *T. harzianum* isolate TH-H-3, *P. fluorescens* isolate PS-4, *T. virens* isolate TV-K-3, bavistin, topsin-M and farm yard manure, respectively. The highest reduction in nematode multiplication (2.6) and root-knot development (0.75) was found in carbofuran treated plants. Whereas, the highest reproduction factor (11.6) and root-knot index (2.85) was observed in untreated inoculated plants.

Key Words: Tomato, *Meloidogyne incognita*, biocontrol agents, organic amendments, pesticides