

RESEARCH ARTICLE

Assessment on population of root knot nematode, *Meloidogyne incognita* and yield in brinjal using various bio agents under pot culture conditions

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SUMMARY

Brinjal (*Solanum melongena*) is one of the most important vegetables which has a great economic importance and also has a high processing value. Brinjals are susceptible to root-knot nematode (*Meloidogyne incognita*) leading to a great economic loss. The life cycle of root-knot nematode takes about 25 days to complete. Second stage juveniles J₂ initiate infection in the host. Root-knot nematodes constitute a major group of plant-parasitic nematodes causing extensive economic damage to nearly all crop plants of economic importance in both tropical and subtropical crop production regions all over the world (Sikora and Fernandez 2005). The efficacy of different bioagents like *Trichoderma viride*, *Bacillus subtilis*, *Pochonia*, *hlamydosporia*, *Purpureocillium lilacinum* against *Meloidogyne incognita* was estimated under four replications and assessment of plant morpho metric characters and root knot index under pot culture conditions has been recorded. All the four bio agents were tested *in vitro* to study their efficacy against *Meloidogyne incognita*. Among all the bioagents tested, *Purpureocillium lilacinum* treatment showed significant increase in root length and shoot length (35.11cm and 59.11cm, respectively) and the untreated control plants recorded the least root length and shoot length (12.02 cm and 15.12cm). All the treatments were found to reduce nematode population in roots and highest reduction was noticed in *Purpureocillium lilacinum* treated plants (161.11 and 138.10) soil (250g) and root (5g), respectively. The untreated plants recorded the highest nematode population of 1129.11 and 1259.20 in soil (250g) and root (5g) respectively. Singnificant reduction in root knot index (1.0) were observed in the treatment *Purpureocillium lilacinum* and Carbofuran which recorded (2.2) per cent. The untreated control plant roots showed a root knot index of 5.00 per cent.

Key Words : Root knot nematode, Brinjal

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