

## **Integrated management of root-knot nematode (*Meloidogyne incognita*) in potato (*Solanum tuberosum* L.) cv. Lady Rosetta**

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**ABSTRACT :** Pot experiment was conducted to find out effective management of root-knot nematode, *M. incognita* in potato cv. Lady Rosseta. Pots containing 10 kg infested soil having initial nematode population of 120 J<sub>2</sub>/100 g soil with different treatments viz., organic amendments (poultry manure, castor cake), bio-control agents (*Purpureocillium lilacinum* and *Pseudomonas fluorescens*) alone and in combination with the organic amendments and carbofuran 3G nematocide alone. After seventy five days of germination, recorded observations revealed that maximum increase in plant growth parameters viz., plant height (cm), tuber weight (g), fresh shoot and root weight (g) and dry shoot and dry root weight (g) were recorded in combined application with poultry manure (22.30 g/pot) enriched with *Purpureocillium lilacinum* 10<sup>6</sup> cfu/g (0.022 g/pot). Whereas, lowest root-knot index on root as well as tuber and number of galls/plant root (1 g) were observed in treatment with poultry manure (22.30 g/pot) enriched with *Purpureocillium lilacinum* 10<sup>6</sup> cfu/g (0.022 g/pot) followed by treatment with poultry manure @ 5 t/ha (22.30 g/pot) enriched with *Pseudomonas fluorescens* 10<sup>6</sup> cfu/g (0.022 g/pot) and both the treatments were at par with each other. Integrated management of root-knot nematode in potato cv. Lady Rosseta revealed significant reduction in nematode population parameters in all the treatments compared to infected check. Maximum reduction in nematode population parameters was observed in treatment with poultry manure (22.30 g/pot) enriched with *Purpureocillium lilacinum* 10<sup>6</sup> cfu/g followed by treatment with poultry manure (22.30 g/pot) enriched with *Pseudomonas fluorescens* 10<sup>6</sup> cfu/g (0.022 g/pot). Maximum healthy tuber was observed in treatment with poultry manure (22.30 g/pot) enriched with *Purpureocillium lilacinum* 10<sup>6</sup> cfu/g (0.022 g/pot), which was statistically at par with the treatment poultry manure (22.30 g/pot) enriched with *Pseudomonas fluorescens* 10<sup>6</sup> cfu/g (0.022 g/pot) and treatment Castor cake (4.46 g/pot) enriched with *Pseudomonas fluorescens* 10<sup>6</sup> cfu/g (0.022 g/pot).

**Key Words :** Potato (*Solanum tuberosum* L.) cv. Lady Rosseta, *Meloidogyne incognita*, organic amendments, biocontrolagents, carbofuran.