

Integrated management of root-knot nematode (*Meloidogyne incognita* race-2) in Castor (*Ricinus communis* L.) crop cv. GCH-7

Ravi Kamaniya, Poonam V. Tapre, D.B. Patel and N.K. Singh

Received September 13, 2017 and Accepted November 7, 2017

ABSTRACT : Pot experiment was conducted to find out effective management of root-knot nematode, *Meloidogyne incognita* race-2 in castor (*Ricinus communis* L.) cv. GCH-7 in 3 kg infested soil having initial nematode population of 150 J₂/100 g soil with different treatments viz., organic amendments (poultry manure, castor cake, FYM), biocontrol agents (*Paecilomyces lilacinus* and *Pseudomonas fluorescens*) alone and combination with the organic amendments and carbofuran 3G nematicide alone. After 45 days of germination, maximum increase in plant growth parameters viz., plant height (cm), fresh shoot and root weights (g) and dry shoot and root weights (g) were recorded in combined application with poultry manure (6.70 g/pot) + *Paecilomyces lilacinus* 10⁶ cfu/g (0.0067 g/pot). Whereas, lowest root-knot index (RKI) of 2.20 was observed in treatment with carbofuran 3G (0.089 g/pot), followed by combined application with poultry manure (6.70 g/pot) + *Paecilomyces lilacinus* 10⁶ cfu/g (0.0067 g/pot) with RKI of 2.33 and both the treatments were at par. Integrated management of root-knot nematode in castor cv. GCH-7 revealed significant reduction in nematode population parameters in all the treatments compared to infected check. However, maximum reduction in nematode population parameters was observed in the treatment with carbofuran 3G (0.089 g/pot), followed by combined application with poultry manure (6.70 g/pot) + *Paecilomyces lilacinus* 10⁶ cfu/g (0.0067 g/pot).

Key Words : *Meloidogyne incognita* race-2, *Ricinus communis*, organic amendments, biocontrol agents, carbofuran.