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Bio-management of root-knot nematode, *Meloidogyne incognita* on cowpea (*Vigna unguiculata* L.)

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ABSTRACT: Pulses occupy a unique position in every known system of farming all over the world. India is a premier pulse growing country of the world and it has been the backbone of agricultural economy in India having a reasonably higher annual output. Cowpea (*Vigna unguiculata* L.) is one of the important pulse crop grown in India. Root-Knot Nematode, *Meloidogyne incognita* is widely distributed in India and cause severe damage to cowpea. Various nematicides, which have so far been used to control root-knot nematode are not only expensive and cumbursome to apply, but also hazardous to human beings and the environment. In view to reduce dependence on nematicides, alternative methods which are eco-friendly and feasible to the growers are being sought. To fulfill this objective, a pot culture experiment was conducted in Department of Nematology, Rajasthan College of Agriculture, Udaipur to study the effect of fungal and bacterial bio-agents *viz*. *Trichoderma harzianum*, *T. viride* and *Pseudomonas fluorescens* @ 5 g, 7.5 g and 10 g/kg seed against root-knot nematode, *M. incognita* infecting cowpea. Chemical check (carbosulfan 3% w/w) and untreated check were also maintained for comparison. The results of the study revealed that *T. harzianum* @ 10 g/kg seed were found most effective in improving plant growth and reduction of nematode reproduction over the control.

Key Words : Cowpea, *Trichoderma harzianum*, *T. viride*, *Pseudomonas fluorescens*, *M. incognita*.