

## **Effect of oil cakes and garlic aqueous based formulations of *Trichoderma viride* on management of *Meloidogyne incognita* in Chilli**

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Root-knot nematode, *Meloidogyne incognita* is a threat to the chilli cultivation, by forming root galls and subsequent wilting. These nematodes are reported surviving in other Solanaceae family crops and in some weeds as well. Bio control of root-knot nematode with antagonistic fungi is an eco-friendly management and best fit to tackle the problem towards toxin free nation. Considering the urgency and collective need, an attempt was made to evaluate the effect of *Trichoderma viride* and its formulations on root-knot nematode, *M. incognita* management. Oil cakes such as neem (*Azadiracta indica*), gingelly (*Sesamum indicum*), mahua (*Madhuca longifolia*) and garlic (*Allium sativum*) extracts were used to evaluate the potential growth and sporulation of *T. viride*. Among the four preparations, neem oil cake readily supported to harvest high spore yield of  $1.75 \times 10^7$  spores/ml. Similarly gingelly and garlic were supported with the spore yield of  $1.57 \times 10^7$  spores/ml and  $1.368 \times 10^7$  spores/ml respectively. Comparatively Mahua obtained low spore yield of  $7.87 \times 10^6$  spores/ml. MI-2 chilli variety was tested to investigate the potential of *M. incognita* and its management by using *T. viride* formulations. Plant growth was significant ( $P < 0.05$ ) in the application of neem oil cake formulation (30.42cm). Extent of galling was significantly low in garlic (9.00) and neem (9.25). The results confirmed that the formulations of neem oil cake, gingelly oil cake extract and garlic aqueous extract stimulated the chilli plant growth, productivity and reduce the nematode infestations. Above all, neem and garlic are the best formulations that can be used to manage the *M. incognita*.

**Key words: Chilli, Root-knot nematode, *Meloidogyne incognita*, Gall, *Trichoderma viride*, Bio-control**