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**Potential of *Trichoderma harzianum* and *Trichoderma virens* in controlling *Meloidogyne incognita* on *Basella alba***

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*Meloidogyne incognita*, the root knot nematodes are a widely spread group of plant pathogens that affect a variety of economically important plants. Even though chemical nematicides are used to control the nematodes at present, these nematicides pose a huge threat to the environment. Taking this fact into account usage of nematophagous fungi has gained popularity as a more ecofriendly approach to control nematodes. *Trichoderma* spp. has a great ability to control nematodes by using trapping mechanisms and by secreting nematicidal metabolites. The present study focuses on the potential of using *Trichoderma harzianum* and *T. virens* in controlling *Meloidogyne incognita*. Three weeks old healthy nematode free *Basella alba* L. (Indian spinach) seedlings were subjected to five different treatments; Soil, Soil+ Nematodes, Soil + Nematodes + Nematicides, Soil + Nematodes + *T. harzianum* and Soil + Nematodes + *T. virens*. Six replicate samples were considered for each treatment. The plants were maintained in a homogenous environment. Some below ground direct growth parameters including number of galls, length, fresh weight and the dry weight of the tap root were measured at one month intervals up to three months. As *Meloidogyne incognita* develop disease symptoms mainly in the root system of *Basella alba* plants the above ground indirect systems were not considered in the present study. The data collected were analyzed using MINITAB version 18 statistical software. At the end of the second sampling time, the plants grown on soil treated with nematodes alone had a significantly higher number of galls ( $72 \pm 6.97$ ) compared to those treated with nematodes + *T. harzianum* ( $7 \pm 0.516$ ), nematodes + *T. virens* ( $8 \pm 0.211$ ) and nematodes and nematicides ( $32 \pm 6.98$ ). However a significant difference was not observed in the length of the tap root. This may be because length of the tap root is not directly affected by the *Meloidogyne incognita* infection. At the end of the third sampling time, the fresh weight ( $14.42 \text{ g} \pm 1.29$ ) and the dry weight ( $10.67 \text{ g} \pm 0.29$ ) of the roots of plants infected with nematodes, were significantly higher than the fresh weight ( $3.83 \text{ g} \pm 0.55$ ) and dry weight ( $2.34 \text{ g} \pm 0.51$ ) of the roots of plants grown in soil. This study clearly indicates that both *T. harzianum* and *T. virens* have a great potential to be used as biocontrol agents of the root knot nematode *Meloidogyne incognita* in *Basella alba* L. This present study can be further improved by investigating the mechanisms employed by *Trichoderma harzianum* and *Trichoderma virens* in controlling *Meloidogyne incognita*.

**Keywords:** *Basella alba*, Bio control, *Meloidogyne incognita*, *Trichoderma harzianum*, *Trichoderma virens*

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