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Effect of NeemAzal-TS® and spinosad on the viability of infective juveniles of two entomopathogenic nematode strains

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In recent years, entomopathogenic nematodes (EPNs) of the families Steinernematidae and Heterorhabtiditae, and the two bio-pesticides, neem and spinosad are acquiring great attention as promising biological control agents of economically important insect pests. Hence, there will be a high potential to incorporate them in Integrated Pest Management programs. However, it is a prerequisite to determine the compatibility of EPNs with these pesticides. In the present study the potential direct contact effects of NeemAzal-TS® (1% Azadirachtin A) and spinosad (12% w/v SC), were evaluated on the viability of infective juveniles (IJs) of two entomopathogenic nematode (EPN) strains, *Steinernema siamkayai* n. sp. and *Steinernema carpocapsae* Weiser All strain (both Rhabditida: Steinernematidae) at three dose rates, i.e., 3, 5 and 7 ml / liter water (ml/lw), and 5, 10 and 20 ml / 20 lw, respectively, in multi-well plates. The viability of IJs was assessed at 6, 12, 24, 48 and 72 h after exposure to each bio-pesticide. Distilled water was used as untreated controls. Irrespective of the exposure times and dose rates tested both bio-pesticides had no effects on the viability of IJs of *S. carpocapsae* and *S. siamkayai* indicating that these two EPN strains are compatible with the use of NeemAzal-TS® and spinosad in IPM systems.

Key words: Entomopathogenic nematodes, NeemAzal-TS®, spinosad, viability.

Financial assistance by German Research Council (DFG) within the framework of the DFG-FOR 431 project, is acknowledged.

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