

Pathogenicity of Korean Isolates of *Steinernema* spp. and *Heterorhabditis* spp. on *Plutella xylostella*, *Spodoptera litura*, and *Spodoptera exigua* in Petri Dish Assay

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The Diamondback Moth, *Plutella xylostella* (Linné) (Lepidoptera: Yponmeutidae), the Armyworm, *Spodoptera litura* (Fabricius) (Lepidoptera: Noctuidae), and the Beet Armyworm, *Spodoptera exigua* (Hübner) (Lepidoptera: Noctuidae) are major Lepidopteran pests in cruciferae crops such as chinese cabbage, radish, etc. Infective juveniles of 11 *Steinernema* strains and 3 *Heterorhabditis* strains (Steinernematidae and Heterorhabditidae) were inoculated on different stages of the larvae of the three insect pests on moistened filter paper in inverted 8.7 Φ × 1.5cm petri dishes at the concentration of 25 IJs/1ml/larvae. The petri dishes were kept in 25°C incubators and checked nematode infection for 7 days. In the tests by single species exposure to 11 *Steinernema* strains, average mortalities of the diamondback, armyworm, and beet armyworm were 63.3~97.7%, 40.0~90.0%, 53.3~90.0% in 2nd~3rd instar and 63.3~100.0%, 26.7~80.0%, 40.0~80.0% in 4th~5th instar, respectively. The average mortalities by 3 *Heterorhabditis* strains were 73.3~86.7%, 63.3~76.7%, 86.7~93.3% in 2nd~3rd instar and 86.7~93.3%, 46.7~60.0%, and 66.7~80.0% in 4th~5th instar, respectively. Pathogenicity of the 14 nematode strains were higher on *P. xylostella* than on *S. litura* and *S. exigua*, but there was no significant difference among the three insect pests.