

Host Range, Specificity, and Virulence of *Steinernema carpocapsae* Pocheon strain and *Heterorhabditis bacteriophora* Hamnyang strain on 39 Lepidopteran pests

**Hyeong Hwan Kim, Ho Yul Choo¹, Dong Woon Lee¹,
Heung Yong Jeon, Myung Rae Cho, Chang Yul Yang,
Han Ik Jang and Myung Soon Yiem**

Horticultural Environment Division, National Horticultural Research Institute, RDA

¹Department of Applied Biology and Environment, Division of Applied Life Science,
Institute of Agriculture & Life Sciences, Gyoengsang National University

This study was carried out in a laboratory condition to determine the host range, specificity, and virulence of *Steinernema carpocapsae* Pocheon strain (Nematoda: Steinernematidae) and *Heterorhabditis bacteriophora* Hamnyang strain (Nematoda: Heterorhabditidae) on 39 Lepidopteran species. The 39 insect species larvae were exposed to infective juveniles (IJ) of the two nematode strains. All the insect pest species showed over 60% mortalities affected by the two nematode strains. The virulences of the two entomopathogenic nematodes were higher in the insect pests of vegetables and flowers than in the insect pests of forest, fruit trees, and rice. The numbers of the infective juveniles emerged per host insect larvae were significantly different according to the size of the host insect larvae. The two nematode strains could complete their life cycle in all the tested insect pest larvae under the laboratory condition.