

ABSTRACT

Efficiency of the Combination of Entomopathogenic Nematodes (Steinernematidae and Heterorhabditidae) against *Curculio elephas* (Col: Curculionidae) and *Polyphylla fullo* (Col: Scarabaeidae) Larvae

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In this study efficiency of entomopathogenic nematodes and their combinations against the larvae of Chestnut fruit pest *Curculio elephas* (Coleoptera: Curculionidae) and June beetle *Polyphylla fullo* (Coleoptera: Scarabaeidae) which is a polifag pests on the root of strawberries, vineyards and various fruit trees were tested. Two different nematode concentrations (50 and 100 infective juveniles) were used in the experiments. *Steinernema glaseri* species showed the lowest (21%), whereas *Heterorhabditis bacteriophora* showed the highest (56%) mortality against *C. elephas* larvae. In general, combination of different nematode species provided synergic effect. Although this synergistic effect, statistical analyses showed that there was no significant difference in most cases. In addition, there was no statistical difference on larval mortality obtained from two different nematode concentrations. It was observed that tested species of entomopathogenic nematodes were considerably ineffective against *P. fullo* larvae. The lowest larval mortality in 50 IJ concentration obtained from *S. glaseri* (2.9%) and the highest from the combination of *S. glaseri* + *H. bacteriophora* (6.3%)

In the pot experiments, similar to plastic cups results, *S. glaseri* showed the lowest (4.7%) and the combination of *S. glaseri* + *H. bacteriophora* (6.3%) showed the highest (19%) larval mortality.

Key words: Entomopathogenic nematodes, *Polyphylla fullo*, *Curculio elephas*, Biological control