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Entomopathogenic Nematodes for biological Control of Musca domestica L.(Insecta:Muscidae)

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This paper presents the results of using entomopathogenic nematodes for biological control of house fly - Musca domestica L. (Insecta: Diptera: Muscidae) in field conditions. The house fly, Musca domestica Linnaeus, is a well-known cosmopolitan pest of both farm and home. This species is always found in association with humans or the activities of humans. The biological agents - entomopathogenic nematodes of the Steinernematidae and Heterorhabditidae families are pathogenic for a range of pests. These nematodes are symbiotically associated with entomopathogenic bacteria Photorhabdus and Xenorhabdus. For the experiment we used pupae and larvae of fly (50-50) colonized 2 kg cattle dung. For infestation of insects the nematode suspension with certain concentration - 10 000 nem/ml was prepared. Three test samples were taken, to each dung sample was added - 70, 50, 25 ml from the mentioned suspension. Appropriately, in test sample I the number of nematodes was 350 per 1 g dung, in test sample II – 250 and in test sample III – 125. As the result showed in sample I pupae and larvae mortality achieved 88.2-78%, in sample II – mortality was 43.5-40% and in test sample III – was approximately - 32.3-28.3%. The insects died mostly in the pupa stage. The analysis of the experiments conducted by us evidence that the most efficient dose of the nematode suspension applied against pupae and larvae of fly colonized on cattle dung is 350 nem/g Both spacies of entomopathogenic namatodes produced mortality of experimental insects, although the *S. feltiae* was more significant than *H. bacteriophira*.

Biography

Manana Lordkipanidze has completed his PhD at the age of 50 years from Ilia State University, Institute of Zoology. She is the main investigator of entomopathogens. Her field usage biological pesticides: entomopathogenic nematodes, entomopathogenic fungi and bacteria for biological control of the major pest insects in Georgia. She has more than 70 papers in reputed journals.

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