ISOLATION AND AUTHENTICATION OF ENТОMOPATHOGENIC NEMATODES FROM ALLAHABAD REGION

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Abstract: Random surveys were carried out for the detection of entomopathogenic nematodes from cultivated areas in different villages of Allahabad district, Uttar Pradesh, India. A total of 60 soil samples were processed for baiting using larvae of cabbage semi-looper, Thysanopulsa orichalca (Lepidoptera: Noctuidae). Of these, only ten soil samples (16.67%) yielded EPNs. Heterorhabditis sp. was yielded from six soil samples (10%) collected from different villages, while Steinernema sp. was yielded from four samples (6.7%). However, no EPNs were recovered from soil samples of twelve villages. The nematodes were recovered from sandy, sandy loam and alluvial soils with soil pH ranging from 6.50 to 8.00. The isolated entomopathogenic nematodes were found to be Steinernema sp. and Heterorhabditis sp. The bioassay of the isolated EPNs was studied under laboratory condition on Corcyra cephalonica larvae in different inoculums level of 50, 100, 150, 200 and 250 IJs/ml. After 120 hours of inoculation the % mortality of the test insect with isolated EPNs was found to be 97.5% with 250 IJs/ml while that of Heterorhabditis sp. was found to be 100%. And also the % net mortality after 120 hours of inoculation with 250 IJs/ml of Steinernema sp. was found to be 79.6% whereas that of Heterorhabditis sp. was found to be 81.6%. Hence it was found out that the dose mortality response on the test insect with isolated Heterorhabditis sp. was observed to be more effective than that of Steinernema sp.

Keywords: EPN, Heterorhabditis sp., Steinernema sp., Corcyra cephalonica

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