Effect of Several Compositions of Artificial Media on Entomopathogenic Nematode Growth In Vitro

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ABSTRACT

Entomopathogenic Nematodes (NEP) of the genus *Heterorhabditis sp.* and *Sterinernema sp.* is a group of biological agents that can quickly control Plant Pest Organisms (OPT) from the orders Lepidoptera, Coleoptera, and Diptera within 24-48 hours. Currently, the use of NEP is experiencing problems in the provision of ready-to-use isolates. The preparation of ready-to-use isolates depends on the type of propagation technique and the composition of the artificial media used. This study aims to determine the effect of media composition on NEP restrictions on each media treatment. This research was conducted in August - December 2022 at the Pest Laboratory, Department of Plant Pests and Diseases, Faculty of Agriculture, University of Jember using a non-factorial Completely Randomized Design (CRD) with 7 recognized treatments and 4 replications to obtain 28 experimental units. The results at 28 days of observation showed the highest population mean results in the MG treatment medium (2 g rice bran flour + 1 g coconut pulp flour + 1 g golden snail flour) which showed the highest population mean of 1119.75 tail/0.25 ml in the second week with the ability to survive in the fourth week with an average population of 88.25 tail/0.25 ml.

Keywords: entomopathogenic nematodes, in vitro propagation, population