Entomology, Ornithology & Herpetology: Current Research
OPEN ACCESS Freely available online
Commentary

Entomopathogenic Nematodes Mass Production and Technology

Nissamka Kumkum*

Department of Biology, College of Natural and Computational Sciences, Dambi Dollo University, Dambi Dollo, Ethiopia

DESCRIPTION

In conventional, conservation-based and supplemental biological control regimes, entomopathogenic nematodes have been used. The majority of practical study has been on their potential as biological flood control agents. Substantial research over the past three decades has revealed both achievements and failures in the management of insect pests of crops, ornamental plants, trees, lawns, and turf. The main developments in their management of insect pests above and below ground are covered in this publication. Insects that reside in foliar, soil surface, cryptic, and subterranean habitats are among those that are targeted. The development of EPNs for commercial application has increased as a result of improvements in mass-production and formulation technologies, the discovery of multiple effective isolates and strains, and the desire to use less pesticides.

Commercially available EPNs are being used to control a variety of pest insects, including scarab larvae in lawns invasive mole crickets in lawns and turf, black vine weevil in nursery plants, fungus gnats in mushroom production, disappearing root weevil in citrus. Yet, a sizable part of the pesticide industry for these pests has not always followed from verifiable success in controlling a range of different insects. Reptiles have scale-covered, dry skin. Amphibians don't, thus they frequently apply mucus to their skin to prevent it from drying out. Toads often have rough bodies covered in elevated glands, some of which generate toxic secretions, in contrast to many other amphibians, such as frogs, salamanders, and caecilians, which have smooth skin.

As reptiles and amphibians share many characteristics, it can be challenging to tell which species belong to which group of animals. In contrast to amphibians, which include creatures like toads, frogs, and salamanders, reptiles are defined as creatures like snakes, turtles, and lizards.

There are 23 different nematode families that contain worms known as entomopathogenic nematodes, which parasitize insects. Of all the nematodes studied for biological control of insects, the Steinernematidae and Heterorhabditidae have drawn the most attention because they have been used as traditional, conservational, and augmentative biological control agents and have many of the traits of successful biological control agents.

The vast bulk of practical research has focused on their potential as biological control agents that can be employed in large-scale flooding. Extensive research over the last three decades has demonstrated both their successes and failures in the control of insect pests of crops, ornamentals, lawns, and turf. The main advantages and disadvantages of this are described in.

Significances on entomopathogenic nematodes

Insect pests can have a negative impact on the environment, our way of life, agricultural output, and market access. In addition to causing harm to crops and food production, parasitizing animals, and generally being an annoyance, pest insects can be unhealthy for humans and a source of aggravation. Western Australia lacks some of the most harmful pest insects in the world. Biosecurity measures on your property are crucial to preventing the spread of insects. Several biological disciplines have been referred to as "biological controls," most notably entomology and plant pathology. It is the use of live predatory insects, entomopathogenic nematodes, or microbial diseases to control populations of pest insects in entomology.

One of the best bio-controlling tools for a number of economically significant insect pests is the EPN. In order to find plants that could be helpful in the management of economically significant insect pests, numerous surveys have been conducted all over the world. In the early days of nematology nomenclature, the bacterial symbionts of Steinernema and Heterorhabditis were referred to be "Entomopathogenic." EPNs kill their hosts quickly compared to other parasitic or necromenic nematodes because of their mutualistic association with bacteria.

CONCLUSION

A few of the benefits they have over chemical pesticides are operator and end-user safety, the absence of waiting periods, minimization of the treated area by monitoring insect populations, minimal harm to natural enemies, and lack of environmental contamination. EPNs have inspired a flurry of scientific and commercial interest due to improvements in mass-production and formulation technologies, the discovery of numerous effective isolates, and the feasibility of increasing pesticide use.

Correspondence to: Nissamka Kumkum, Department of Biology, College of Natural and Computational Sciences, Dambi Dollo University, Dambi Dollo, Ethiopia, E-mail: Kumkumni123@gmail.com

Received: 05-Jan-2023, Manuscript No. EOHCR-23-22786; **Editor assigned:** 04-ug-2023, PreQC No. EOHCR-23-22786 (PQ); **Reviewed:** 31-Jan-2023, QC No. EOHCR-23-22786; **Revised:** 07-Feb-2023, Manuscript No. EOHCR-23-22786 (R); **Published:** 14-Feb-2023, DOI: 10.35248/2161-0983.23.12.306.

Citation: Kumkum N (2023) Entomopathogenic Nematodes Mass Production and Technology. Entomol Ornithol Herpetol.12:306.