

BIOCHEMICAL ANALYSIS IN COCONUT TREE PEST *ORYCTES RHINOCEROS* INFECTED WITH *STEINERNEMA – XENORHABDUS* COMPLEX

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ABSTRACT

Entomopathogenic nematodes may infect and kill pest insects. They do so by a free-living infective juvenile, which actively searches for soil-borne insect pests. They are insect-specific, safe and contribute to the natural regulation of many populations of pest insects. In this study, the survey of entomopathogenic nematode was conducted in Coimbatore district and the isolation of EPN- *Steinernema* spp. is used to kill their coconut tree pest *oryctes rhinoceros* beetle. So this study aims to evaluate the pathogenic potency or biopesticidal efficiency of the biochemical components in the infected pest which can be the indicator of the mode of action of the biopesticide. The physiological changes in *oryctes rhinoceros* which resulted in entomopathogenic nematode infection have been investigated. It was observed that a drastic decline in total protein, total carbohydrates, total lipids and total amino acids occurred in infected *oryctes rhinoceros*. The biochemical contents were estimated at 24, 48 and 72 hours after infection of *Steinernema* spp. to the *oryctes rhinoceros* grub with respect to the untreated larvae.

KEYWORDS: Entomopathogenic nematodes, *Steinernema*, *Oryctes rhinoceros* & *Xenorhabdus*