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Assessment of Egg Parasitoids in paddy and vegetable Farming Systems in Puliyankulama and Mahailluppalama Area, Anuradhapura District of Sri Lanka

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Biological control of insect pest is becoming popular as an effective pest control strategy. Egg parasitoids are considered as most effective, as they are able to remove the insect herbivores from the agro ecosystem before they emerge as larvae. The present study was conducted with the objective of assessing the egg parasitoid guild in paddy and vegetable farming systems in Anuradhapura district of Sri Lanka. Five Hymenopteran egg parasitoids belong to the super families of Chalcidoidea and Platygastroidea were identified, emerged from the collected host eggs in Puliyankulama. *Telenomus cyrus* (32.14%) was emerged from *paddy black bug eggs collected from* Puliyankulama. Trichogrammatidae egg parasitoids were identified from Green stink bug and *Epilachna* egg masses found from the bean fields in Puliyankulama. Ten egg parasitoid species were emerged from brinjal and legume insect pests egg masses collected in Mahailluppallama. *Trissolcus* sp. (54.54%) was recorded in Mahaillupallama vegetable farming system, and *Trissolcus basalis* was one of the predominantly emerged species from the *Nezara viridula* egg mass. The emerged parasitoid from the *Leucinodesor bonalis* eggs belonged to family Scelionidae (36%), while the others belonged to families Diapriidae, Chalcidoidea, Scelionidae, Ormyridae and Mymaridae. Higher level of parasitism was reported in Mahailluppallama (77.1%) comparable to Puliyankulama (7.1%). Implementation of strategies to conserve existing egg parasitoids is quite beneficial to achieve a high suppression of insect pest populations in ecosystems.

Keywords*: Egg parasitoids, Puliyankulama, Mahaillupallama*

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