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Natural Enemies Occurring in Rice Fields with a Special Reference to the Egg Parasitoid, *Trichogramma evanescens* Westwood

BY

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Abstract

The world rice crop is attacked by more than 100 species of insects, 20 of them can cause economic damage. Insect pests that can cause significant yield losses are stem borers, leaf hopper and plant hoppers, chironomids and stink bugs. Biological control can play an essential role in reducing pest population in field crops,. *Trichogramma evanescens* s an effective egg parasitoid, and attacks a variety of serious insect crop pests especially lepidopterous ones in their early stages (their eggs). Eggs of *Sitotroga cerealella* were as one of the most commonly used as natural host for rearing *Trichogramma* spp.

The efficiency of *Trichogramma* parasitoids is negatively affected by the cold storage of the host eggs that are exposed to the parasitoid after being stored for various periods. Cold storage has an impact on the efficiency of *Trichogramma* parasitoids, female percentage and female longevity.

In addition, it was found that the earlier emerging parasitoids have higher biological aspects compared to later emerging ones.

Host egg age and size has asignificant effects on the rate of parasitism by *Trichogramma evanescens* increase in host egg age, reduce rate of parasitism. By contrast, the parasitism increases by increase of host egg size.

The field release of T *evanescens* proved to be efficient in controlling the rice stem borer, *chilo agamemnon* in both dead hearts and white heads.