

EFFECT OF INTEGRATED MANAGEMENT APPROACH FOR COMBATING ANGOUMOIS GRAIN MOTH (*Sitotroga cerealella*) POPULATION AT DIFFERENT GENERATION

T. Akter¹, M. Jahan² and M. Ali³

ABSTRACT

Effect of integrated management approach was studied for combating angoumois grain moth, *Sitotroga cerealella* (Olivier) at different generation in terms of adult emergence, adult longevity and population ratio during the period from March 2011 to September, 2011 in the Department of Entomology, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh. The treatments of the studies were: Cleanliness of the storage including the container and premises (sanitation) + Use of dried neem kernel powder @ 10 gm/kg (T₁); Cleanliness of the storage including the container and premises (sanitation) + Use of dried tobacco leaves powder @ 5.0 gm/kg (T₂); Sanitation + use of insecticide in the empty bins as preventative measure + Use of dried neem kernel powder @ 10 gm/kg (T₃); Sanitation + use of insecticide in the empty bins as preventative measure + Use of dried tobacco leaves powder @ 5.0 gm/kg (T₄); Sanitation + Release of *Trichogramma evanescense* after 30 days interval (number of *Trichogramma* = 100/plastic container or replication (T₅); Sanitation + Application of fumigant practice with phosphine gas with doses depending on the temperature and humidity and the pest population (T₆) and Untreated control (T₇). The study was laid out in a Completely Randomized Design (CRD) with four replications. In 1st generation no adults emerged in T₆ treatment which was followed by T₅ (9.67) whereas the highest (38.00) adult was recorded in T₇ (untreated control) treatment. Similar trend of adult emergence was observed in 2nd generation and 3rd generation of the pest. In 1st generation no adult longevity was recorded in T₆ treatment whereas the highest (10.00 days) adult longevity was recorded in T₇ treatment. Statistically significant variation was recorded for number of female, male and their ratio for 1st, 2nd and 3rd generation of angoumois grain moth in stored rice grain due to integrated management approaches.

Keywords: angoumois grain moth (*Sitotroga cerealella*), integrated management approach, adult emergence, adult longevity, population ratio