

**MONITORING INFESTATION RATES OF THE TOMATO FRUIT WORM,
HELICOVERPA ARMIGERA HUBNER (LEPIDOPTERA: NOCTUIDAE) IN TOMATO
 FIELDS AT LAKE NASSER REGION, ASWAN, UPPER EGYPT
 BY**

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ABSTRACT

Monitoring the population dynamics of the tomato fruit worm, *Helicoverpa armigera* Hubner (Lepidoptera: Noctuidae) and estimating its rates of infestation in tomato fields at Lake Nasser region, Aswan, Egypt as basic data for pest control programs was carried out. Estimation of the infestation rates using direct counts of the pest larvae and number of moths per pheromone trap was carried out in three sites at Khalabsha district, Aswan Governorate for two successive growing seasons 2004/2005 and 2005/2006. Highest rates of *H. armigera* infestation; 5.9 and 11.8 % were recorded during March and April, respectively. General seasonal means of infestation rate were 4.4 and 5.49 % in seasons; 2004/2005 and 2005/2006, respectively. General seasonal mean number of moths /trap in the three sites was 17.9 and 7.9 moths /trap during the 1st and 2nd seasons, respectively. Statistical analysis showed that there was a positive correlation between the rate of infestation and the number of trap catches in both seasons and the correlation was larger in the second season.

Key Words: *Helicoverpa armigera*, Tomato, Infestation rates, Pheromone traps, Egypt

INTRODUCTION

Nasser Lake is located behind the High Dam at Aswan Governorate, Upper Egypt. The lake extends about 500 km, 350 in Egypt plus 150 in Sudan. Tomato is one of the essential vegetable crops in this region. Its cultivated area is about 2014 feddans (18.3 % of the total area), represented mainly by Nile and winter lugs (World Food Program, assisted project Nasser lake report, 2004). Tomato plants are subject to be infested with several insect pests such as; whiteflies, aphids, leaf miners and some lepidopterous pests. The tomato fruit worm, *Helicoverpa armigera* Hubner (Lepidoptera: Noctuidae), is the major insect pest in the tomato fields in this region (Abbas, 1998).

Talekara *et al.* (2005), Bues *et al.* (2005) and Moral Garcia (2006) reported that

H. armigera is a highly polyphagous pest that attacks over 100 plant species including such widely grown and economically important crops as cotton, maize, tobacco, pigeon pea, chickpea and tomato. In the Nile Valley region, *H. armigera* has five generations per year, three generations of them on cotton and two on vegetables. Seasonal infestation with the tomato fruit worm usually lasts from April to September in the valley, while it extends from October to May, according to the lug in Lake Nasser region. Larvae of *H. armigera* may attack tomato crops from transplanting until fruit maturity but the most sensitive growing period coincides with the most attractive phenological stages of ovipositing females, from the beginning to the ending of the flowering stage. The predilection of this moth species for the harvestable fruiting parts, high