Abd-Elgayed, A. A., Abdella, M. M. H. and Desoki, Salwa S. B.(2014): Population dynamics of tomato pin worm, *Tuta absoluta* Meyrick (Lepidoptera: Gelechiidae) and survey of associated natural enemies on tomato in Fayoum Governorate, Fayoum J. Agric. Res. & Dev., 28(1): 148 - 158.

الملخص الانجليزي :

The present work was carried out at Experimental Farm, Fac. of Agric., Fayoum Univ. and aimed to shad some a light on population fluctuations of the tomato pinworm, *T. absoluta* and its associated natural enemies and relation to some weather factors at Fayoum Governorate on tomato crop (*Solanum lycopersicum* L.) cultivated in four successive plantations during 2011/12 and 2012/13 seasons.Natural enemies associated with *T. absoluta* were the predator (*Atheta* sp.) and 3 parasitiod hymenopteran insect species (*Bracon* sp, *Halticoptera* sp and *Apanteles* sp). The entomopatogenous bacteria *Bacillus* sp (Bacillales: Bacillaceae) was also isolated from dead and moribund larvae.

In summer plantations, no mines were observed on leaves and fruits during all season 2011. However, during the second summer season of 2012, slight infestations were recorded on tomato leaves during the farmer 4 weeks of the season and no infestations were observed on the fruits.

In winter plantation: in 2011/12 the population fluctuated slightly from Nov. 2011until end of Feb 2012, one period activity was recorded from end of Feb until end of April. Fruits infestations began to appear from end of April extended to end of plantation. While in 2012/13, few mines began to appear at mid Nov 2012, increased

gradually during the successive weeks to arrive its highest on leaves at end of Feb 2013 (peak of 681 mines /20 leaves). Fruit infestation increased slightly during the successive weeks of fruiting to arrive the highest count of mines during the first week of March 2013 (214 mines /20 fruits).