INTRODUCTION
I. INTRODUCTION

Cotton (*Gossypium barbadense* L.) is one of the major agricultural crops cultivated in Egypt. *Pectinophora gossypiella* (Saunders) is one of the most serious insect pests attacking cotton plants in Egypt. It causes losses in yield and reduction in quality of lint and seeds (*Noble, 1969*).

Cotton plants and pests require a certain amount of heat energy to progress from one stage to another in their life-cycle. Thus, the use of degree-days (DD)- the amount of accumulated heat units that promote an organism's growth- as a tool in crop management and pest control is now widely accepted. The developmental rate of organisms can be predicted more accurately by using accumulated heat units than by using calendar days. Heat units accumulations have been used to characterize the relationship between plant growth and insect development (*Sevacherian and El-Zik, 1983 and Fry, 1983*).

*P. gossypiella* diapausing larvae overwinter in cotton bolls, trash and the soil. During this stage, the insect is subjected to a number of adverse climatic and biological factors (predators and parasites) that cause mortalities among these larvae (*Slosser*
and Watson, 1972 and Bariola et al., 1976). The knowledge of the role of natural enemies is a key factor for integrated pest management programs. The pink bollworm natural enemies play an important role in controlling this pest during cotton growing and when the pink bollworm larvae enter diapause.

The present work aimed to study the following points:
1- The effect of constant temperatures on pink bollworm and some of its natural enemies.
2- The seasonal fluctuation of pink bollworm under field conditions.
3- The cotton infestation percentage by pink bollworm larvae.
4- The relationship between weather factors and entrance of pink bollworm larvae into diapause and moths’ emergence at the next year.
5- Survey of the natural enemies associated with the pink bollworm larvae during the period of diapause and the common predators & their seasonal abundance in cotton fields.