INTRODUCTION

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Both the black cutworm *Agrotis ipsilon* (Hufnagel) and the rice weevil *Sitophilus oryzae* are considered as very important insect pests in Egypt. The cutworm is polyphagous insect attacks a large number of field and vegetable crops. Larvae cut completely or partially the seedling stage of the plant directly over the ground surface.

The second pest Sitophilus oryzae is one of the main insect pests which attack wheat grains (*Triticum aestivum*, L) causing severe damage resulting in magnitude loss in quantity and quality of grain during storage.

A large number of insecticides have been applied for many years to control these two pests, resulting in risks of environmental hazards and pollution. Most synthetic insecticides act similarly on target and non-target organisms, therefore representing a danger to beneficial insects, wildlife and humans being. Increasing insect resistance to many of synthetic pesticides clearly indicate that basic research must be directed to the discovery of new safer types of pest control agents in order to insure high production and preservation of plant and animal agricultural product.

In recent years increasing attention has been given to the control of pests using natural products as environmentally safe methods for the control of different pests. This has been proved and must be enhanced.

Over the last ten years, much effort has been directed towards higher plants as a source of biologically active compounds.

Higher plants can also contain compounds, which act on communication signals (semi chemicals) modifying the behavior and development of insect pest or pathogenic organisms and also in regulating hormone signaling in higher animals.

Today over thousands species of plants are known that possess some insecticidal activities. Many plants have a history of use as folk remedies and are still in local use by different societies throughout the world to kill or repel insects.

The best example of these plants is *Chrysanthemun cinerariaefolium,* from which the well known six esters pyrethrin I and II. Pyrethrins can be considered as the best natural contact insecticides. For many years Nicotine and Rotenone were on the head of insecticides of plant origin. Many volatile and essential oil produced from several plants are toxic to some insects. Also, many alkaloids, isolated from some plant extracts are toxic to insects.

Natural flavonoids can be considered as antifeedant for black cutworm. Many extracts contain steroids, terpenes and triterpenes which inhibit the feeding or show juvenile hormone activity.

In this, study we will try to highlight the bioactivities of ten plant extracts against the fourth larval instars of *Agrotis ipsilon* and adults of *Sitophilus oryzae.*

The aim of the work:-

The objectives of this research are to evaluate the activity of the botanical extracts from ten plants, performed by five different solvent vary in their polarities against *Agrotis ipsilon* and *Sitophilus oryzae.*

The following points were studied: -

1-Evaluation the toxicity of these plant extracts against adults of *Sitophilus oryzae* and *Agrotis ipsilon* larvae.

2- The biological activity of these plant extracts against the tested pests.

3-Evaluation the antifeedant activities of these plant extracts against 4^{th} instars larvae of *Agrotis ipsilon.*

4- The histological effects of the most effective plant extracts against the midgut of *Agrotis ipsilon.*

5-Evaluation of the repellant activities of these plant extracts against the adult of *Sitophilus oryzae.*

6-Isolation and identification of the active components from the plants given higher biological activity in preliminary tests.