بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

Alexandria University
Faculty of Agric. (Saba Basha)
Plant Protection Dept.,

INTEGRATED MANAGEMENT OF INSECT-PESTS INFESTING TOMATO IN ALEXANDRIA GOVERNORATE

A THESIS

Presented to the Graduate School

Faculty of Agriculture (Saba Basha)

Alexandria University

In Partial Fulfillment of the Requirements

for the degree of

MASTER OF AGRICULTURAL SCIENCES

(PESTICIDES)

Department of Plant Protection

BY

Abeer Ahmed Mohamed Menesy

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ALEXANDRIA UNIVERSITY
Faculty of Agriculture
(Saba Basha)

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Presented by

ABEER AHMED MOHAMED MENESY

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DEPARTMENT OF PLANT PROTECTION

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I- INTRODUCTION

Tomato belonges to the genus *Lycopersicon* especially *L. esculentum* that is grown for its edible fruit. Tomato is considered among the most important vegetables, where it is the second most commonly grown vegetable crop in the world while potato being the first.

Also, tomato is considered to be an important vegetable in Egypt, where the cultivated area occupies about 280,456 Feddans according to Agricultural Extension and Statistics (Agricultural Economic, Ministry of Agriculture and land Reclamation in 2000). Alexandria Governorate is considered to be the first governorate of Egypt for its area which is cultivated with tomato, where this area occupies about 36,037 Feddan and produced about 522,552 Tons.

Tomato is exposed to a great number of pests, diseases, insects, weeds and nematodes. Therefore, it is important to find out the main methods to control these pests espcially the insect-pests.

Insects attacking tomato plant are becoming increasingly difficult to control, particularly in the field. The major insect of concern being the whitefly ***Bemisia tabaci.*** **Genn, (Homoptera: Aleyrodidae) (Schuster, 1997).** In addition, insects can carry and transmitt diseases such as various geminiviruses, which are now well adentifiend **(Polston and Anderson, 1997).**

Control means and methods are important and they have been improved and applied to reduce the tomato insect-pests. The chemical control is one of them and the great one. Most diseases, nematodes and

weeds can be also controlled chemically, although the use of chemicals for control can render fruit less desirable in marketplace. Chemicals that are used for controlling insect-pests vary widely in their effectiveness. **Papadopoulos *et al.* (1997), Snyder (1997),** and **Gill and Sanderson (1998)** discussed insects as well as diseases control measures which can be easilly applicable to greenhouse tomato production.

A new line of pesticides (biopesticides) is being developed and some of them containing naturally occurring fungus organisms that can invade the insect 's body. These products can be used to control whiteflies, thrips and aphids. Also, these products would be safe for workers and the environment without causing any side effect upon the beneficial insects (**Stephens, 1997**).

The nutrition of tomato plants determines to a large extent its susceptibility to pest infestation, so that it was important to study the effect of the foliar spray on tomato plants and to show whether they increase or reducde the pest infestation.

So that, the aim of the present research work is directed to investigate the effect of two chemical insecticides, a bio-insecticide, a nutritive compound and two natural compounds (neem oil and a biostimulant copmound) on those insects attacking tomato throughout the growing season.These compounds would be evaluated to be involved in IPM program for tomato.

In addition to throw a light on the effectiveness of those suggested compounds on insect-pests infestation and on yield. Therefore a schematic

diagram of an integrated management program for insect-pests attacking tomato in Alexandria area would be remarktable. Moreover this program would be useful and could be applicable ones by those farmers who grow tomato in Alexandria governorate.

REVIEW OF LITERATURE