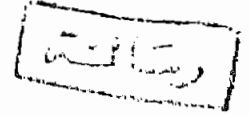


TOXICOLOGICAL STUDIES ON SOME PREDACEOUS MITES

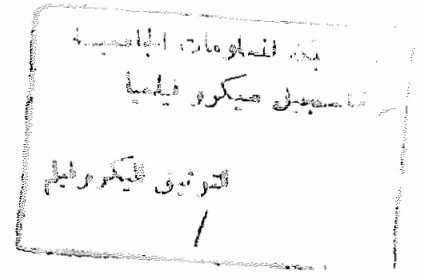


By

GOMAA MOHAMED AHMED ABO-ELELLA

A thesis submitted in partial fulfillment
of
the requirements for the degree of
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Department of Plant Protection
Faculty of Agriculture
Ain Shams University

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BY

GOMAA MOHAMED AHMED ABO-ELELLA

B.Sc. of Agric. Sci. (Plant Protection) 1986

Fac. of Agric., Zagazig Univ.

This thesis for M. Sc. degree has been Approved by:

Prof. Dr. Madiha M. Abd-EL-Hamid

Madiha M. Abd-EL-Hamid

Prof. of Agricultural Zoology, Fac. of Agric., Alexandria University.

Prof. Dr. Sherif M. Hafez

S. M. Hafez

Prof. of Agricultural Zoology, Fac. of Agric., Ain Shams University.

Prof. Dr. Esmat M. K. Hussein

Esmat M. K. Hussein

Prof. of Pesticides, Fac. of Agric., Ain Shams University.

Date of Examination: 12/6/ 1993.



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BY

GOMAA MOHAMED AHMED ABO-ELELLA

B.Sc. of Agric. Sci. (Plant Protection) 1986

Fac. of Agric., Zagazig Univ.

Under the supervision of:

Prof. Dr. Esmat M.K. Hussein

Prof. of Pesticides, Fac. Agric., Ain Shams Univ.

Prof. Dr. Aly H. Rasmy

Prof. of Acarology, National Research Center, Cairo

Dr. Samia M. Kilany

Lecturer of Acarology, Fac. Agric., Ain Shams Univ.

ABSTRACT

The sublethal effects of three acaricides i.e., Comite, Peropal and Tedion on the biology and predatory efficiency of the two predaceous mites Amblyseius swirskii and Agistemus exsertus were laboratory assessed.



The present study reveals a variation in the level of response of both predators to the acaricides used, and the effects of these acaricides were nocuous nonetheless sublethal concentrations were applied.

In addition, results reveal also that the stigmaeid mite, A. exsertus is less tolerant to the acaricides used compared to the phytoseiid mite, A. swirskii.

AIN SHAMS UNIVERSITY

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CONTENTS

	Page
I. INTRODUCTION	1
II. REVIEW OF LITERATURE	3
III. MATERIALS AND METHODS	18
Structural formula of pesticides used	18
1. Bioassay tests on the two-spotted spider mite .	20
2. Mass-rearing of the predatory mites	22
3. Biological Studies	23
a. Feeding predaceous mites on treated nymphs of the prey	23
b. Treatment of predatory larvae	24
c. Rearing predators on treated plant-leaf discs	25
d. Toxicity of pesticides when both prey and predator were chemically treated	25
e. Treatment of prey, predatory larvae, and the rearing plant surface	26
IV. RESULTS	27
Toxicological studies	27
I. Effect of Comite	29
1. Developmental response of <u>Agistemus exsertus</u>	29
1.1. Treatment of the prey <u>T. urticae</u>	29
* Consumption of treated prey by <u>Agistemus exsertus</u>	31

Cont.:	Page
1.2. Treatment of the predator	33
* Consumption of untreated prey by treated predator	34
1.3. Treatment of both prey and predator	35
* Consumption of treated prey by treated predator	36
2. Developmental response of <u>Amblyseius swirskii</u>	37
2.1. Treatment of the prey <u>T. urticae</u>	37
* Consumption of treated prey by <u>Amblyseius swirskii</u>	39
2.2. Treatment of the predator	39
* Consumption of untreated prey by treated predator	41
2.3. Treatment of plant surface	42
* Consumption of untreated prey by untreated predator placed on treated surface .	43
2.4. Treatment of prey, predator and surface ..	44
* Consumption of treated prey by treated predator placed on treated surface	45
II. Effect of Peropal	45
3. Developmental response of <u>Agistemus exsertus</u>	45
3.1. Treatment of the prey <u>T. urticae</u>	45
* Consumption of treated prey by <u>Agistemus exsertus</u>	48

Cont.:

Page

4. Developmental response of <u>Amblyseius</u>	
<u>swirskii</u>	48
4.1. Treatment of the prey <u>T. urticae</u>	48
* Consumption of treated prey by	
<u>Amblyseius swirskii</u>	51
4.2. Treatment of the predator	53
* Consumption of untreated prey by treated predator	54
4.3. Treatment of both prey and predator	55
* Consumption of treated prey by treated predator	56
III. Effect of Tedion	57
5. Developmental response of <u>Agistemus</u>	
<u>exsertus</u>	57
5.1. Treatment of the prey <u>T. urticae</u>	57
* Consumption of treated prey by	
<u>Agistemus exsertus</u>	59
5.2. Treatment of the predator	59
* Consumption of untreated prey by treated predator	61
5.3. Treatment of both prey and predator	62
* Consumption of treated prey by treated predator	63

Cont.:	Page
6. Developmental response of <u>Amblyseius</u>	
<u>swirskii</u>	64
6.1. Treatment of the prey <u>T. urticae</u>	64
* Consumption of treated prey by	
<u>Amblyseius swirskii</u>	66
6.2. Treatment of the predator	68
* Consumption of untreated prey by	
treated predator	68
6.3. Treatment of plant surface	69
* Consumption of untreated prey by	
untreated predator placed on treated	
surface	69
6.4. Treatment of prey, predator and plant	
surface	70
* Consumption of treated prey by treated	
predator placed on treated surface ...	71
V. DISCUSSION	72
VI. SUMMARY	76
VII. REFERENCES	87
VIII. ARABIC SUMMARY	

LIST OF TABLES

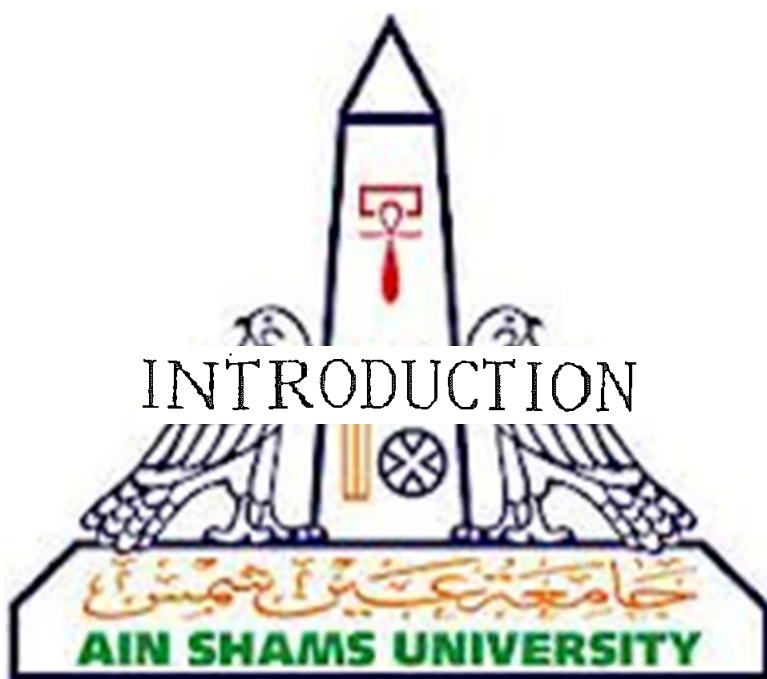
Table No.	Page
1. Toxicity of the Comite, Peropal and Tedion to <u>T. urticae</u> nymphs	27
2. Effect of Comite on developmental durations of <u>A. exsertus</u> and egg oviposition	30
3. Effect of Comite on consumption of <u>A. exsertus</u> ...	32
4. Effect of Comite on developmental durations of <u>A. swirskii</u> and egg oviposition	38
5. Effect of Comite on consumption of <u>A. swirskii</u> .	40
6. Effect of Peropal on developmental durations of <u>A. exsertus</u> and egg oviposition	46
7. Effect of Peropal on consumption of <u>A. exsertus</u> .	49
8. Effect of Peropal on developmental durations of <u>A. swirskii</u> and egg oviposition	50
9. Effect of Peropal on consumption of <u>A. swirskii</u> .	52
10. Effect of Tedion on developmental durations of <u>A. exsertus</u> and egg oviposition	58
11. Effect of Tedion on consumption of <u>A. exsertus</u>	60
12. Effect of Tedion on developmental durations of <u>A. swirskii</u> and egg oviposition	65
13. Effect of Tedion on consumption of <u>A. swirskii</u>	67



LIST OF FIGURES

No.	Page
1. Toxicity of Comite, Tedion and Peropal to <u>T. urticae</u> nymphs	28





INTRODUCTION

INTRODUCTION

For many centuries, the settlements of man, specially in agriculture, have had to contend with various undesirable and sometimes harmful organisms, i.e. weeds, insects, microorganisms and others, collectively called pests.

In addition, agriculture expansion has created many pest problems and has intensified some others.

In Egypt, as well as other areas of the world, the phytophagous mites, particularly the two-spotted spider mite, Tetranychus urticae Koch, has been considered a potentially serious pest of wide variety of major crops, infesting cotton, crop and ornamented plants, evergreen and deciduous fruit trees as well. Such populations of this animal pests are primarily controlled by the predaceous mites.

The use of chemical pesticides has become the predominant method of controlling these unwanted organisms in much of the world. Also, significant groups of pests, i.e. insects, mites etc. have developed strains that are genetically resistant to the pesticides.

In most investigations attempts were made to evaluate the relative potency of pesticides used to control the spider mites. On the other hand, effects on the predaceous mites preying on such sprayed spider mite have, to some extent, been neglected.

Accordingly, efforts were made, in the present investigation, to evaluate the relative toxicity and effects of LC₅₀ dosages of certain pesticides, namely Comite, Peropal and Tedion on some biological aspects, i.e. development, fecundity and consumption of the prey T. urticae by the predaceous mites Amblyseius swirskii Athias - Henriot and Agistemus exsertus Gonzalez. The former animal pertaining to family Phytoseiidae while the latter to Stigmaeidae.