

STUDIES ON MITES ASSOCIATED WITH CERTAIN OIL CROPS

BY

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ABSTRACT

The present work was carried out to observe the ecological studies on mite and insect species associated with some oil crops, and toxicity of certain compounds against major mite, pestes in Sharkia Governorate. Nine arthropod species belonging to nine families were determined in the total collected samples of soybean crop leaf that are classified to two major groups i.e., insect and mite. All arthropods occurred with high were the major arthropods where found with highly occurrence in tender and old leaves on oil crops during growing season. Population dynamics of Arthropods species associated with Soybean, peanut and sesame in Abu-Kabir region at Sharkia Governorate were recorded all species of Arthropods appeared with fluctuated population during the growing season. The correlation values was high (0.72) between the *Tetranychus urticae* and temperature, other values were positive in all specie of arthropods, but there values for R.H.% were positive in all mite species, while it was negative in cotton leaf worm and predatory insects. Food type effect on some biological aspects of the predatory mite, *Amblyseius gossipi* were able to develop to maturity and reproduction, respectively, utilizing a wide range of food substances under laboratory conditions. Cannibalism was observed when food was scarce in *A. gossipi*. Successful development from larvae to adult in *A. gossipi* occurred on the tetranychid mite, date palm and maize pollen supplied as food concerning life table parameters of *A. gossipi* indicated that thermal factor has a great influence. Prey densities effect on some biological aspects of predacious mites, results showed that, the daily rate of *T. urticae* females consumption increased with increasing prey density and the fecundity increased gradually in relation to the amount of consumed preys. Net reproductive rate (R_o) differed according to temperature as this values increased with temperature increased. The efficiency of the experimented pesticides, i.e., Maccomite (Hexythiazox), Vistro (Colofetezen), Ortus (Fenpyroximate) and Bioranza (*Metarhizium anisopliae*) against adult female of *Tetranychus urticae* and their latent effects Ortus was the most effective to adult females of *T.urticae* than the other tested compounds with LC_{50} of 7.93 ppm. Maccomite and Vistro have a moderate toxic effect with LC_{50} of 13.24 and 108.11 ppm, respectively. Mortality percentages of adult female of *T. urticae* increased after 7 days more than those after 3 and 5 days. The mortality percentage increased with

increasing concentration of biocide, Bioranza. Predatory mite, *A. gossipi* was more tolerance for pesticides compared with phytophagous mite. All pesticides shortened the longevity and reduced the fecundity of adult female of *T. urticae* and *A. gossipi*. It would be appeared that conjoint usage of tested *Metarhizium anisopliae* with predatory mite, *Phytoseiulus macropilis* in IPM may require applying biological control agents, entomopathogenic fungi and the predators in sequence unseparated by time intervals. Field tests referred that the tested acaricides caused a variable difference in their reduction percentages for predator and phytophagous mites. This acaricides was less toxic against predatory mite compared with phytophagous mites.

No.	LIST OF CONTENTS	Page
	ACKNOWLEDGMENTS	i
	ABSTRACT	ii
	LIST OF CONTENTS	iv
	LIST OF TABLES	vii
	LIST OF FIGURES	viii
I	INTRODUCTION	1
II	REVIEW OF LITERATURE	4
2.1	Ecological studies	4
2.1.1	Occurrence of arthropods species associated with certain field oil crops	4
2.1.2	Population dynamics of Arthropods species associated with oil crops	8
2.2	Biological studies:	12
2.3	2.3. control study:	23
2.3.1	Adulticidal action	23
2.3.2	Entomopathogenic fungi action on the mites	25
2.3.3	Latent effects	28
III	MATERIALS AND METHODES	32
3.1	Ecological studies:	32
3.1.1	Occurrence of arthropod species associated with certain oil, crop plants in Sharkia Governorate	32
3.1.2	Sampling procedures	32
3.1.3	Mounting and identification of the surveyed mites	33
3.1.4	Population dynamics of arthropod species on same oil crops, soybean, peanut and sesame during seasons of 2018	33
3.2	Biological studies:	33
3.2.1	Stock culture of <i>Tetranychus urticae</i>	33
3.2.2	Rearing of the predatory mite; <i>Amblyseius gossipi</i> Elbadry	34
3.2.3	Effect of food type on some biological aspects of predatory mite <i>A. gossipi</i>	34
3.2.4	Feeding <i>Amblyseius gossipi</i> on different food type	35
3.2.5	Effect of prey density on egg laying, longevity and feeding behavior of <i>Amblyseius gossipi</i>	35
3.2.6	Effect of temperature on predaceous mite <i>Amblyseius gossipi</i>	36

3.2.7	Life table parameters of <i>Amblyseius gossipi</i>	36
3.3	Control studies:	37
3.3.1	Acaricides used	37
3.3.2	Laboratory studies	37
3.3.2.a	Adulticidal action against phytophagous mites	37
3.3.2.b	Latent effect of LC ₅₀ of some acaricides on longevity and fecundity of <i>T. urticae</i> adult females	38
3.3.2.c	Latent effect of LC ₅₀ of some acaricides on longevity and fecundity of <i>Amblyseius gossipi</i> adult females	38
3.3.3	Dispersal of entomopathogenic fungi, <i>Metarhizium anisopliae</i> and its synergistic with predatory mite, <i>Phytoseiulus macropilis</i> for controlling <i>Tetranychus urticae</i>	39
3.3.4	Field Studies	42
3.3.4.a	Efficiency of the tested acaricides against <i>T. urticae</i> on soybean crop	42
3.3.4.b	Efficiency of the tested acaricides against <i>T. urticae</i> on peanut crop	43
3.3.4.c	Efficiency of acaricides against <i>T. urticae</i> on sesame crop	43
IV	RESULTS AND DISCUSSION	45
4.1	Ecological studies:	45
4.1.1	Occurrence of arthropod species associated with certain field oil crops in Sharkia Governorate	45
4.1.1.a	Arthropod species associated with soybean crop during season 2018	45
4.1.1.b	Arthropod species associated with peanut crop during season 2018	46
4.1.1.c	Arthropod species associated with sesame crop during season 2018	47
4.1.2	Population dynamics of Arthropod species associated with oil crops in Abu-Kabir region at Sharkia Governorate	49
4.1.2.a	population dynamic of Arthropod species associated with soybean crop during season 2018	49
4.1.2.b	population dynamic of Arthropod species associated with peanut crop during season 2018	51
4.1.2.c	population dynamic of Arthropod species associated with sesame crop during season 2018	53
4.1.3	Relative abundance of Arthropods on same oil crops	55
4.2	Biological studies:	57
4.2.1	Effect of food type on some biological aspects of the predatory mite, <i>Amblyseius gossipi</i>	57

4.2.2	Longevity and fecundity of <i>Amblyseius gossipi</i> on different food types	59
4.2.3	Effect of food type on some life table parameters of <i>Amblyseius gossipi</i>	59
4.2.4	Effect of prey density on some biological aspects of <i>A. gossipi</i>	60
4.2.5	Developmental time in days, survival of immature stages and life cycle of <i>Amblyseius gossipi</i> on three different temperatures	61
4.2.6	Effect of temperature on biology of the <i>Amblyseius gossipi</i>	63
4.3	Control studies:	64
4.3.1	Laboratory tests	64
4.3.1.a	Adulticidal action of the tested compounds against the <i>T. urticae</i>	64
4.3.1.b	Adulticidal action for some compounds against predatory mite, <i>Amblyseius gossipi</i> :	68
4.3.1.c	Latent effect of LC ₅₀ of some acaricides on some biological aspects adult female of <i>T. urticae</i>	71
4.3.1.d	Latent effect of four acaricides LC ₅₀ on some biological aspects of <i>Amblyseius gossipi</i> female.	73
4.3.2.	Dispersal of entomopathogenic fungus, <i>Metarhizium anisopliae</i> and its synergistic effect with predatory mite, <i>Phytoseiulus macropilis</i> for controlling <i>Tetranychus urticae</i>	74
4.3.2. a.	Efficiency evaluation of the entomopathogenic fungus, <i>M. anisopliae</i> on some biological aspects of <i>P. macropilis</i>	74
4.3.2. b.	Dispersal of fungus, <i>M. anisopliae</i> loaded on three predator's mites after 10 days	75
4.3.2. c.	Release of <i>P. macropilis</i> on cucumber plants in greenhouse for controlling <i>T. urticae</i>	76
4.3.3	Field tests	78
4.3.3.a	Effect of some acaricides against <i>Tetranychus urticae</i> and predatory mite <i>Amblyseius gossipi</i> in soybean field	78
4.3.3.b	Effect of some acaricides against <i>Tetranychus urticae</i> and predatory mite <i>Amblyseius gossipi</i> in peanut field	81
4.3.3.c	Effect of some acaricides against <i>Tetranychus urticae</i> and predatory mite <i>Amblyseius gossipi</i> in sesame field.	84
V	SUMMARY	87
VI	REFERENCES	95
	الملخص العربي	v-1

LIST OF TABLES

Table	Title	Page
1.	Dominant of arthropod species associated with soybean crop during seasons 2018	46
2.	Dominant of arthropod species associated with peanut crop during seasons 2018	47
3.	Dominant of arthropod species associated with sesame crop during seasons 2018	48
4.	Population dynamics of arthropod species on soybean crop during seasons 2018	50
5.	Population dynamics of arthropod species on peanut crop during season 2018	52
6.	Population dynamics of arthropod species on sesame crop during season 2018	54
7.	Relative abundance of Arthropods on soybean crop during season 2018	55
8.	Relative abundance of Arthropods on peanut crop during season 2018	56
9.	Relative abundance of Arthropods on sesame crop during season 2018	57
10.	Duration (in days) of developmental stages and survival rate % of <i>Amblyseius gossipi</i> on different food at $27 \pm 2^\circ\text{c}$ and $65 \pm 5\%$ R.H	58
11.	Longevity and fecundity of <i>Amblyseius gossipi</i> fed on different food types at $27 \pm 2^\circ\text{c}$ and $65 \pm 5\%$ R.H.	59
12.	Effect of food type on the life table parameters of <i>Amblyseius gossipi</i> at $27 \pm 2^\circ\text{c}$ and $65 \pm 5\%$ R.H.	60
13	Influence of three prey levels of <i>T. urticae</i> adult stage on the consumption, fecundity and longevity of <i>Amblyseius gossipi</i> females at $27\pm 2^\circ\text{C}$ and $65\pm 5\%$ R.H.	61
14	Developmental time (in days), survival of immature stages and life cycle of <i>Amblyseius gossipi</i> on three different temperatures at $65\pm 5\%$ R.H.	62
15	Effect of temperature on biology of the predatory mite <i>Amblyseius gossipi</i> at $65\pm 5\%$ R. H.	63
16.	Toxicity effect of Maccomite 10 % WP on adult <i>Tetranychus urticae</i>	64
17.	Toxicity effect Ortus 5 % EC on adult <i>Tetranychus urticae</i>	65
18.	Toxicity effect of Vistro 50 % SC on adult <i>Tetranychus urticae</i>	66
19.	Comparative toxicity of some acaricides against adult females of <i>Tetranychus urticae</i>	67
20.	Mortality percentage of <i>T. urticae</i> adult females treated with concentrations of Bioranza	68

Table	Title	Page
21	Toxicity effect of Maccomite against the predatory mite, <i>Amblyseius gossipi</i>	69
22	Toxicity of Vistro against the predatory mite, <i>Amblyseius gossipi</i>	69
23	Toxicity of Ortus against predatory mite, <i>Amblyseius gossipi</i> .	70
24	Toxicity of fungicide, Bioranza against predatory mite, <i>Amblyseius gossipi</i> .	70
25	Comparative toxicity of some pesticides against <i>Amblyseius gossipi</i>	71
26.	Effect of LC ₅₀ for some pesticides on longevity and fecundity <i>Tetranychus urticae</i> Koch adult female	72
27.	Latent effect of four acaricides LC ₅₀ on some biological aspects of <i>Amblyseius gossipi</i> female	73
28.	Some biological aspects of <i>P. macropilis</i> as affected <i>M. anisopliae</i> treatment	75
29.	Dispersal of fungus, <i>M. anisopliae</i> loaded on three predator's mites after 10 days from its release on Kidney bean infested with <i>T. urticae</i>	76
30.	Release of <i>P. macropilis</i> on cucumber plants in greenhouse for controlling <i>T. urticae</i> .	77
31.	Efficiency of some acaricides against <i>Tetranychus urticae</i> in soybean field	79
32.	Efficiency of some acaricides against predatory <i>Amblyseius gossipi</i> mite in soybean field	80
33.	Efficiency of some acaricides against <i>Tetranychus urticae</i> in peanut field	82
34.	Efficiency of some acaricides against predatory mite <i>Amblyseius gossipi</i> in peanut field	83
35.	Efficiency some acaricides against <i>Tetranychus urticae</i> in sesame field	85
36.	Efficiency of some acaricides against predatory mite <i>Amblyseius gossipi</i> in sesame field	86

LIST OF FIGURES

Figure	Title	Page
1	Dispersal of fungus, <i>M. anisopliae</i> loaded on <i>P. macropilis</i>	41
2	<i>Metarhizium anisopliae</i> conidia on <i>T. urticae</i> and kidney bean leaf	76