

**STUDIES ON SOME MITES ASSOCIATED
WITH THE ABUNDANT FIELD CROPS AT
SHARKIA GOVERNORATE, EGYPT**

By

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B. Sc. Agric. Zagazig University (1997)**

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Abstract

The aim of this work is simply to study the incidence of acarofauna that inhabit some field crops at three localities in Sharkia Governorate, Egypt. Summarized results show the following points:

1. Ninety four mite species belonging to 50 genera, 28 families and 4 suborders, were recorded.
2. The Actinedid mites were represented by 39 species, belonging to 10 families and 19 genera. The Gamasid mites were recorded by 34 species belonging to 10 families and 16 genera. The Acarid mites were recorded by 6 species, three families and 5 genera, and the Oribatid mites were recorded 15 species, 5 families and 10 genera.
3. The collected mites were classified according to their feeding habits to three groups:
 - a. These are Flora feeding species.
 - b. fauna feeding species.
 - c. Species whose food is uncertain.
4. Duration of the larval stage of *Chyuletus malaccensis* female and male showed that (7.1 & 8.55) and (7.53 & 7.9) days, when fed on egg and immature stages, respectively; (6.45 & 8.15 and 6.65 & 6.9) days for protonymphal stage; (11.7 & 0.0) for deutonymphal stage; (28.7, 52.4 & 81.16) (17.7, 18.9 & 36.68) days for female and male life cycle, longevity and life span when fed on prey eggs, resp.. During the life span, the female predator consumed a total average of 384.6 eggs. For male, these values were 215.6 and 64.8 individuals when fed on every prey, resp.. The total number of eggs laid was 30.9 eggs, with a daily rate of 1.8 eggs/♀.
5. Duration of the larval stage of *Agistemus vulgaris* female and male were (2.71 & 3.17) and (2.44 & 2.95) days when fed on *T.*

cucurbitacearum(eggs and immatures), resp.; (1.77 & 2.81), (1.88 & 2.85) and (1.67 & 2.91), (1.67 & 2.38) days for ProtonymphalandDeutonymphal stages for both sexes, resp.; (9.57 & 11.88), (31.99 & 29.69), (41.56 & 41.57) and (8.77 & 11.3), (28.95 & 28.38), (37.72 & 39.73) days for female and male life cycle, longevity and life span when fed on every prey, resp.. During the life span, the female predator consumed a total average of (347.3 & 86.5) and (152.1 & 13.76) preys for female and male, resp..The total number of eggs laid was 69.6 & 55.8 eggs with a daily rate of 2.6 & 2.15 eggs/♀ when fed on *T. cucurbitacearum* (eggs and immatures), resp..

6. After 24hr., the pesticide, concord exhibited the highest toxicity to the adult stage of *T. cucurbitacearum* than gate-sast at both levels of toxicity (LC₅₀& LC₉₀ values). The picture with 48hr. of exposure was different because the pesticide gate-sast was more toxic than concord at both levels of toxicity. Finally, gate-sast revealed the highest toxic at both levels of toxicity (LC₅₀& LC₉₀ values) after 72 hr. where the effectiveness of tested pesticide could be descendingly arranged as follow: Gate-Sast> Concord.
7. Sub-lethal dose (1/10 of LC₅₀ value) of gate-fast and after 24 hour of exposure showed that adult females of *T. cucurbitacearum* preferred the untreated section of the leaves to feed and deposit eggs (highly repellent)
8. After exposure to Sub-lethal dose of gate-fast there was a highly significant effect on some biological aspects of the mite, *T. cucurbitacearum* such as, shortened the oviposition and postoviposition periods, adult longevity, life span, and number of eggs/female, while prolonged pronouncedly the incubation period as compared with control.

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