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TOXICOLOGICAL STUDIES ON SOME AGRICULTURAL PESTS

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ARABIC SUMMARY

Introduction

herbicides and metallic-fertilizers, that affect the metabolism of xenobiotics, but the information is scattered and often appear contradictory.

Therefore, the current study was carried out to throw a beam of light on the main following points:

1- The role of some compounds, such as herbicides, acaricides, and micronutrients, as inducers for acetyl choline esterase, acid and alkaline phosphatases, transaminases (i.e. GOT and GPT) as well as non specific esterases in the carmine spider mite, *Tetranychus urticae* (Boisd.) and their relationship with the acaricidal toxicity of some acaricides commonly used for controlling mites.

2- To establish the proper time-interval between using the inducers and the toxicants.

3- To evaluate these agrochemicals on the plastid pigments content of soyabean leaves and the subsequent effect on weight of seeds (yield).

Review of Literature

REVIEW OF LITERATURE

I. Effectiveness of pesticides against *Tetranychus sp.*:

El-Halwany *et al.* (1981) determined the toxicity of 5 insect growth regulators and 2 commonly used acaricides to eggs and adult females of *Tetranychus arabicus* [*T. urticae*] in laboratory. LC_{50}s following exposure to treated sweet-potato discs showed that methoprene was the most toxic growth regulator to both eggs and adult females. However, Tedion and Kelthan were more toxic than methoprene to eggs while dicofol was the most toxic against adult females.

Abd El-Hafez (1981), evaluated 7 acaricides at various rates against *Tetranychus arabicus* (*T. urticae*) in Menofeia Governorate in 1980. Reductions in mite populations during the first 4 weeks after treatment showed that Exp. 5612 and Tedifol [both of unstated composition], which contain suflur compounds gave 93.6 and 40.8% control, respectively and had high residual activity.

The effectiveness of 20 acaricides at various rates for the control of *Tetranychus arabicus* [*T. urticae*] on soybean was evaluated in field plot tests in Beniswef Governorate, Egypt. Mite populations 1, 2 and 3 weeks after treatment showed that dinobuton, pirimiphosmethyl, pirimicarb, and azocyclotin at 600,1000,2506 gm/feddan, respectively gave at least 79% control when compared with untreated control (**Mohamed and Hafez, 1981**).

Seven acaricides were tested by **Nasser *et al.* (1982)** in the laboratory and field in Egypt against *Tetranychus urticae* on peach and plum. Comite 75% e.c., Kelthan 18.5% e.c., Morocide 40% e.c., Torque 55% e.c, chlorobenzilate 50% e.c. and Tedifol 6% (a mixture of Kelthan and tetradifon) when used at 130, 250, 100, 150, 150 and 250 ml/fed., respectively reduced mite numbers in the field by 74.81 to 97.46%, while eidial (phenthoate) was less effective.

A laboratory method was described by **Capriol *et al.* (1983)**, involving leaf discs of *Phaseolus vulgaris*. New experimental acaricides were tested in Italy for selectivity to *Tetranychus urticae* Koch. Cyhexatin, tetradifon, and the experimental ovicide JH 388 (1-decyloxy)-4-(6-methoxy-4-hexynyl)