بسم الله الرحمن الرحيم

شبكة المعلومـــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـسـم ﴾

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

THE ROLE OF SOME NON- TRADITIONAL CONTROL ELEMENTS IN MANAGEMENT OF CODLING MOTH

BY

SHADI MAHMOUD FASKHA

B. Sc. Agric. Sc. (Plant Protection), Tishreen University, Syria, 2003

A thesis submitted in partial fulfillment
of
the requirements for the degree of

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in
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Faculty of Agriculture
Ain Shams University

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Approval Sheet

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ABSTRACT

Shadi Mahmoud Faskha: The Role of Some Non- Traditional Control Elements in Management of Codling Moth. Unpublished M. Sc. Thesis, Department of Plant Protection, Faculty of Agriculture, Ain Shams University, 2009.

This study was carried out in three different regions in Syria, i.e. El-Marrana (Tartous Governorate), Daher El-Jabal (As-Sweida Governorate) and Sirghaya (Rif Dimashq Governorate). The analysis study of the questionnaire survey showed that codling moth, *Cydia pomonella* L. is a very important insect of apple orchards. The status of codling moth correlated significantly with each of the, control methods, number of sprays, and use of pheromone traps according to the region. There were significant differences between the regions in terms of numerous practices as the use of pheromone traps, used insecticides, the productivity, knowledge's of the growers about the damage of pesticides and IPM system. On the other hand, the adoption of IPM practices by apple grower was estimated depending on the scale range include four levels; the three regions come in the entry level IPM.

Furthermore, by using sex pheromone traps in conjunction with the day-degrees (DDºC) model, results showed that the codling moth had three generations (518.6, 497.3 and 430.3 DDºC, respectively) in El-Marrana, and two generations (427.6 & 589 and 502 & 558.5 DD°C, respectively) in both the Daher El-Jabal and Sirghaya, respectively. In addition, a simple table to calculate accumulated DD instead using mathematical models was suggested. On the other hand, the relationship between the two environmental factors means temperature and length of day and population density of the codling moth indicated positive significant correlation coefficients for both factors. In the contrary data revealed non significant correlation coefficients with the relative humidity.

The efficacy of some control elements in management of codling moth was evaluated; results indicated that the efficacy of *Trichogramma cacoeciae* release was between 35.42 and 81.44%, depending clearly of the number of release points, apple variety, and tress distances. Results also showed that the application of (Esfenvalerate + Chlorpyrifos) was more effective than applied them individually. Furthermore, the pheromone and cardboard traps did not give good results. However, the effectiveness of integration treatment between *T. cacoeciae,* (Esfenvalerate + Chlorpyrifos), and cardboard traps gave the highest efficacy (63.87 to 82.28%).

Key words: Codling moth, Forecasting**,** Degree-days, Environmental factors, Questionnaire, Adoption, *Trichogramma cacoeciae*, insecticides, Traps, IPM, Syria

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