شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

بعض الوثائق الاصلية تالفة

بالرسالة صفحات لم ترد بالاصل

STUDIES ON EFFECTIVENESS OF CERTAIN METHYL BROMIDE ALTERNATIVES AGAINST SOME STORED PRODUCTS INSECTS IN GASTIGHT BINS

BY

WESAM MOHAMED KAMAL ELDIN EBRAHIM

M. Sc., Fac. Of Agric. (Plant protection-Economic Entomology) Moshtohor, Zagazig University (1996)

A DISSERTATION

Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

IN

(Economic Entomology)

PLANT PROTECTION DEPARTMENT, FACULTY OF AGRICULTURE, MOSHTOHOR, ZAGAZIG UNIVERSITY, BENHA BRANCH, EGYPT

2002

STUDIES ON EFFECTIVENESS OF CERTAIN METHYL BROMIDE ALTERNATIVES AGAINST SOME STORED PRODUCTS INSECTS IN GASTIGHT BINS

BY

WESAM MOHAMED KAMAL ELDIN EBRAHIM

M. Sc., Fac. Of Agric. (Plant protection-Economic Entomology) Moshtohor, Zagazig University (1996)

Under the Supervision of:

Prof. Dr. Faris Amin Mohamed El-Lakwah, Prof. of Economic Entomology and control of stored product pests at the Plant Protection Dept. Fac. of Agric. Moshtohor, Zagazig University.

Prof. Dr. Ahmed Abdel-Wahab Abdel-Gawaad, Prof. of Economic Entomology at the Plant Protection Dept. Fac. of Agric. Moshtohor, Zagazig University.

Dr. Refaat Abdel-Shafy Mohamed, associate Prof. of Economic Entomology at Plant Protection Research Institute Agric., Res., Center, Ministry of Agriculture.

STUDIES ON EFFECTIVENESS OF CERTAIN METHIL BROMIDE ALTERNATIVES AGAINST SOME STORED PRODUCTS INSECTS IN GASTIGHT BINS

BY

WESAM MOHAMED KAMAL ELDIN EBRAHIM

B. Sc. Fac. of Agric. Moshtohor, Zagazig University (1992)
M. Sc. Fac. of Agric. (Plant protection-Economic Entomology) Moshtohor, Zagazig University (1996)

This thesis for Ph. D degree has been

Approved by:

Prof. Dr. Faris Amin Mohamed El-Lakwah ..... Faris El-Lakwah
Prof. of Economic Entomology at Fac. of Agric. Moshtohor, Zagazig University.

Prof. Dr. Ahmed Abdel-Wahab Abdel-Gawaad .....
Prof. of Economic Entomology. Fac. of Agric. Moshtohor, Zagazig University.

Prof. Dr. Mawaheb Mahmoud Zewar ..... M. M. Zewar .....
Chief Researcher on Stored Product divesion at Ministry of Agriculture.

Dr. Metwaly Mostafa Khttab ..... M. Khattab .....
Assestant Prof. of Economic Entomology at Fac. of Agric. Moshtohor, Zagazig University.

Dr. Refat Abdel-Shafy Mohamed ..... R. A. Mohamed
Associate Prof. of Economic Entomology at Ministry of Agriculture.

Date of Examination: 2/4/2002

ACKNOWLEDGEMENT

This work is a main part of the work plan of the National project of integrated pest management for post-harvest pests. Therefore, this present study was carried out and supported by the above mentioned project, financed by EEC- Counterpart funds through the Egyptian Ministry of Agriculture and Land Reclamation.

The authors is highly indebted to the authorities of this National project.

Meanwhile, I want to express my deep thanks and gratitude to **Prof. Dr. Faris Amin Mohamed El-Lakwah**, Prof. of Economic Entomology and Control of Stored Product pests at the Plant Protection Dept., Fac. of Agric. Moshtohor, Zagazig University for his supervision; suggesting the subject, valuable assistance and reviewing the manuscript.

My deep cordial thanks also extended to **Prof. Dr. Ahmed Abdel-Wahab Abdel-Gawaad**, Prof. of Economic Entomology at the same Department for his supervision and helpful advice.

My deep thanks also to **Dr. Refaat Abdel-Shafy Mohamed**, associate Prof. of Economic Entomology at Plant Protection Research Institute Agric., Res., Center, Ministry of Agriculture for his supervision and valuable assistance.

CONTENTS