

127, 17 27, 17 (20) 77, 17 (20









جامعة عين شمس

التوثيق الالكتروني والميكروفيلم



نقسم بللله 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 %



ثبكة المعلومات الجامعية





Information Netw. " Shams Children Sha شبكة المعلومات الجامعية @ ASUNET بالرسالة صفحات لم ترد بالأص

Genetic and Biotechnological Studies, on Resistance to Root Knot Nematode in Pepper (Capsicum spp.)

By

Mansour Mamdouh Mansour

B.Sc. Agric., Tanta Univ., 1990 M.Sc. Agric., Zagazig Univ., 1999

A DISSERTATION

Submitted in Partial Fulfillment of Requirements for the Degree of

DOCTOR OF PHILOSOPHY

In

Horticulture (Vegetable Crops)

Horticulture Department
Faculty of Agriculture at Moshtohor
Zagazig University (Benha Branch)

BNIEL

2005



Genetic and Biotechnological Studies, on Resistance to Root Knot Nematode in Pepper (Capsicum spp.)

By

Mansour Mamdouh Mansour

B.Sc. Agric., Tanta Univ., 1990 M.Sc. Agric., Zagazig Univ., 1999

THESIS

Submitted in partial fulfillment of The requirements for the degree of

DOCTOR OF PHILOSOPHY

Under the supervision of:

Prof. Dr. Ahmed Reda Abd El-Mohsen Agour .

Professor of Vegetable Breeding, Faculty of Agriculture. Moshtohor, Zagazig University (Benha Branch)

Dr. Lotfi Abd El-Fattah Abd El-Rahman Bady, L.A.A..

Associate Professor of Vegetable Breeding, Faculty of Agriculture, Moshtohor, Zagazig University (Benha Branch)

Department of Horticulture Faculty of Agricultural Moshtohor Zagazig University, Benha Branch

Brallan

Genetic and Biotechnological Studies, on Resistance to Root Knot Nematode in Pepper (Capsicum spp.)

By

Mansour Mamdouh Mansour

B.Sc. Agric., Tanta Univ., 1990 M.Sc. Agric., Zagazig Univ., 1999

This Thesis for Ph.D. Degree has been **Approved by**:

Prof. Dr. Ahmed Abd El-Moneim Hassan Abd. A. A. A. Professor of Vegetable Breeding, Faculty of Agriculture, Cairo University

Prof. Dr. Mohamed Serag El-Din Abd El-Sabour. Professor and Head of genetic Department Faculty of Agriculture, Moshtohor, Zagazig University (Benha Branch)

Prof. Dr. Ahmed Reda Abd El-Mohsen Agour Professor of Vegetable Breeding, Faculty of Agriculture, Moshtohor, Zagazig University (Benha Branch)

Dr. Lotfi Abd El-Fattah Abd El-Rahman Body, L.A.A.
Associate Professor of Vegetable Breeding, Faculty of Agriculture,
Moshtohor, Zagazig University (Benha Branch)

Committee in charge

Date: 27/2/2005

ACKNOWLEDGEMENTS

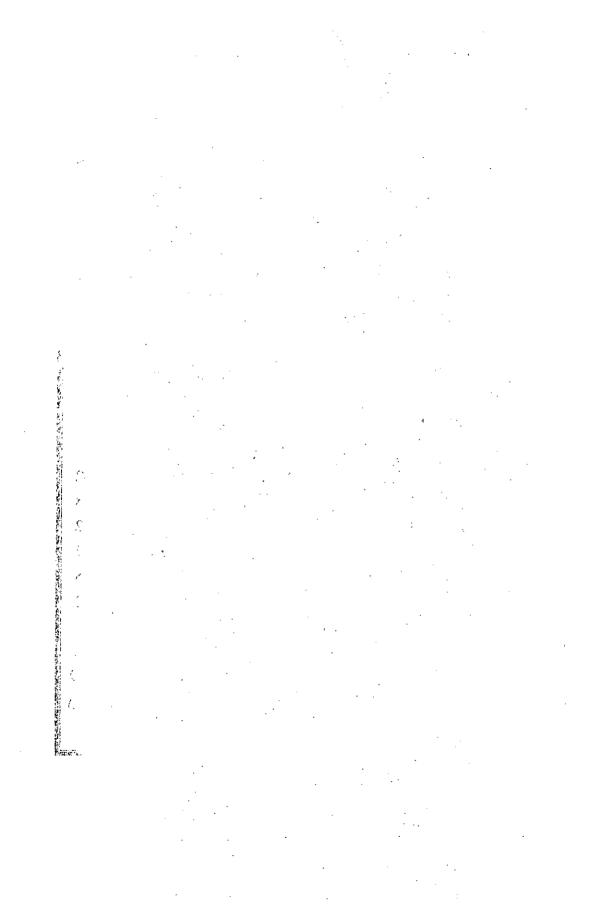
The author wishes to express sincere appreciation to *Dr. Ahmed Reda Aggour, Professor* of vegetable breeding College of Agriculture at Moshtohore, Department of Horticulture, Zagazig University, Benha Branch for sound guidance during the academic and research program. His precious suggestion and guidance were great help in conducting the experiments, analyzing the data, and writing the dissertation.

The author also expresses great appreciation to *Dr. Lotfy* Abd El-Fatah Abd El-Rahman, Associate Professor of vegetable Breeding, Department of Horticulture, Faculty of Agriculture at Moshtohore, Zagazig University, Benha Branch for his valuable guidance and suggestions during this study.

The author likes to express sincere appreciation to *Prof. Dr. Ahmed Mohamed Korayem*, Plant Pathology Department (Nematology), National Research Center, for his precious suggestions and guidance and technical assistance which were great help during this study.

The author also likes to express his appreciation to *Dr. Mohammed Refaat*, Lecturer of Genetics, Department of Genetics, Faculty of Agriculture at Moshtohore, Zagazig University, Benha Branch for his technical assistance during conducting the present study.

The author expresses deep appreciation to his mother, father, brothers, wife, lovely sons Mohamed and Alaa. Also appreciation extends to *Dr. Aly Abd El- Halim*, and to all of his collagues in the Collage of Agriculture at Moshtohor and collagues in Desert Research Center.



CONTENT

Items	Page
INTRODUCTION	1
REVIEW OF LITERATURE	3
MATERIALS AND METHODS	19
RESULTS AND DISCUSSION	33
1. Greenhouse Experiment	33
1.1. Quantitative Evaluation of Plant Reaction	33
1.1.a. Number of galls	33
1.1.b. Number of eggs	43
1.2. Qualitative Evaluation of Plant Reaction	49
2. Field Experiment	50
2.1. Root phenols content	50
2.2. Leaf chlorophyll content	62
2.3. Plant total yield	68
2.4. Detached leaves fresh weight/plant	72
2.5. Root fresh weight/plant	82
Correlation Study	88
3. Bioassay Experiment	93
4. Acid Phosphatase Isozyme Analysis Experiment	95
SUMMARY	98
REFERENCES	109
ARABIC SUMMARY	۱_ ۹