الكفاءة الغذائية لبعض المركبات على إنتاج الحرير والكفاءة التناسلية لدودة الحرير التوتية

فاطمة وائل محمود محمد نور

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وقد تمت مناقشة الرسالة والموافقة عليها

اللجنة :	
	أ.د. محمد عبد الغفار محمود
ز هر	الحشرات الاقتصادية ، كلي
	أ.د. محمد عاطف رجب داود
بة الزراعة جامعة عين شمس	أستاذ الحشرات الاقتصادية كلب
	أ.د. مديحة أبو المكارم رزق
بة الزراعة جامعة عين شمس	أستاذ الحشرات الاقتصادية كلب
	أ.د. أحمد علي جمعة
بة الزراعة جامعة عين شمس	أستاذ الحشرات الاقتصادية كل

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أ.د. أحمد علي جمعة
 الاقتصادية قسم وقاية النبات كلية الزراعة جامعة عين شمس
 (المشرف الرئيسي)
 أ.د. مديحة أبو المكارم رزق
 الاقتصادية قسم وقاية النبات كلية الزراعة جامعة عين شمس
 أ. د. سعاد مرسي محمود

رئيس بحوث متفر فسم بحوث الحرير معهد بحوث وقاية النباتات ، مركز البحوث الزراعية

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NUTRITIONAL EFFICIENCY OF CERTAIN COMPOUNDS ON SILK PRODUCTION AND FECUNDITY OF MULBERRY SILKWORM

BY

FATMA WAEL MAHMOUD MOHAMED NOUR

B.Sc. Agric. Sc. (Entomology), Ain Shams University, 2001

A thesis submitted in partial fulfillment

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Department of Plant Protection Faculty of Agriculture Ain Shams University **Approval Sheet**

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BY

FATMA WAEL MAHMOUD MOHAMED NOUR

B.Sc. Agric. Sc. (Entomology), Ain Shams University, 2001

This thesis for M. Sc. degree has been approved by:

Prof. Dr. Mohamed Abdel-Ghaffar	
Mahmoud	Professor of Economic
Entomology, Faculty	
of Agriculture, El-Azhar University	
Prof. Dr. Mohamed Atif Ragab Daoud	
Professor Emeritus of Economic Entomology	у,
Faculty of Agriculture, Ain Shams University	у
Prof. Dr. Madiha Aboul Makarem Rizk	
Professor Emeritus of Economic Entomology	У,
Faculty of Agriculture, Ain Shams Universit	у
Prof. Dr. Ahmed Ali Gomaa	
Professor Emeritus of Economic Entomology	γ,
Faculty of Agriculture, Ain Shams University	у

Date of Examination: 17/01/2009 NUTRITIONAL EFFICIENCY OF CERTAIN COMPOUNDS ON SILK PRODUCTION AND FECUNDITY OF MULBERRY SILKWORM

BY FATMA WAEL MAHMOUD MOHAMED NOUR

B.Sc. Agric. Sc. (Entomology), Ain Shams University, 2001

Under the supervision of:

Prof. Dr. Ahmed Ali Gomaa

Professor Emeritus of Economic Entomology, Dept. of Plant Protection, Faculty of Agriculture, Ain Shams University (Principal Supervisor)

Prof. Dr. Madiha Aboul Makarem Rizk

Professor Emeritus of Economic Entomology, Dept. of Plant Protection, Faculty of Agriculture, Ain Shams University

Prof. Dr. Souad Morsy Mahmoud

Head of Research Emeritus, Seric. Res. Dept., Plant Protection Research Institute, Agricultural Research Center

ABSTRACT

Fatma Wael Mahmoud Mohamed Nour : Nutritional Efficiency of Certain Compounds on Silk Production and Fecundity of Mulberry Silkworm. Unpublished M.Sc. Thesis, Department Plant Protection, Faculty of Agriculture, Ain Shams University, 2009.

The present study was carried out during the two successive spring seasons of 2006 and 2007 at the laboratory of Sericulture Research Department of Plant Protection Research Institute, Agricultural Research Center, Ministry of Agriculture and Land Reclamation in Giza-Egypt.

The present study was planed to evaluate the biological, physiological, productivity and biochemical changes in SA105 and Novi races of the silkworm *Bombyx mori* L. fed on two mulberry leaf varieties, from 1^{st} to 5^{th} instars larvae, and supplemented with three types of protein sources during fifth instar larvae.

Data revealed that SA105 race has the best biological, economical, technological, productive and biochemical characters, followed by Novi race. Whereas the best mulberry leaves varieties for feeding larvae was *Morus alba* variety *Kokuso-27* followed by *Morus alba* variety *kanava-2*.

Supplemented mulberry leaves with 1.5:10 w/w (casein powder : leaves) caused the highest positive significant effects on the tested biological, economical, technological, productive and biochemical characters followed by 1:10 w/w (soybean flour : leaves) then 1.5:10 w/w (palm pollen grains : leaves).

Key Words:

Mulberry, Silkworm, *Bombyx mori* L., Nutrition, Supplements, Casein, Soybean flour, Palm pollen grains, Silk production, Fecundity.

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