



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكرو فيلم

جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون أية 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 %



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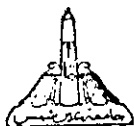
بعض الوثائق الأصلية تالفة



شبكة المعلومات الجامعية



بالرسالة صفحات
لم ترد بالأصل



Faculty of Science

Physiological Effects of Certain Herbicides on *Vicia faba* Plant And Some of Its Associated Weeds

By

FAIDA AHMED AHMED SHARARA

B.Sc & M.Sc(Botany)

Thesis

Submitted for the Degree of
Doctor of Philosophy

In
Science
(Botany)

AIN SHAMS UNIVERSITY
Faculty of Science
Department of Botany

Raifa A. Hassanein

Supervised by *Fatma E.M. El-Quesni*

Prof.Dr.Raifa Ahmed Hassanein
Professor of Plant Physiology ,
Faculty of Science
Ain Shams University

Prof. Dr. Fatma E.M.El-Quesni
Professor of Weed Biology & Control
Botany Department ,
National Research Centre

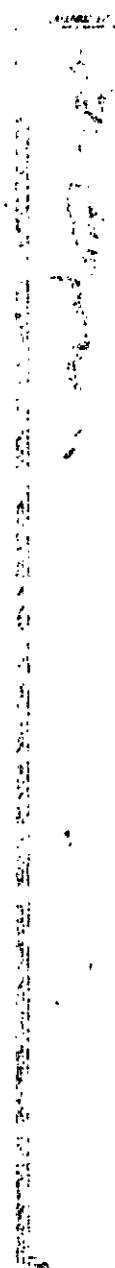
Dr. Salwa Said Gaweesh
Associate . Prof. of Weed Biology & Control ,
Botany Department ,
National Research Centre

Salwa Gaweesh

**Botany Department
Faculty of Science
Ain Shams University**

2000

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

﴿وَعَلَّمَكَ مَا لَمْ تَكُنْ
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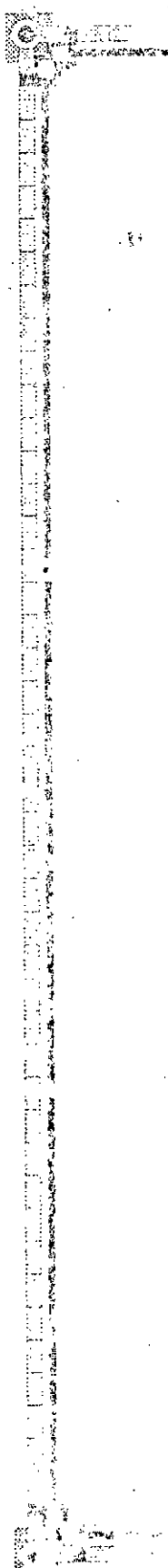
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Approval Sheet

**Title : Physiological effects of certain herbicides on
Vicia faba plant and some of its
associated weeds.**

**By
Faida Ahmed Ahmed Sharara
(B. Sc. & M. Sc.)**

This Thesis for Ph.D Degree has approved by:

Prof. Dr. Kamal Ebrahim Abdel- Hamid

Professor of Plant Physiology,
Faculty of Science,
Al-Azhar University (for boys).

Prof. Dr. Shaban Abdel-Hady Shaban

Professor of Weed Science,
Faculty of Agriculture,
Cairo University.

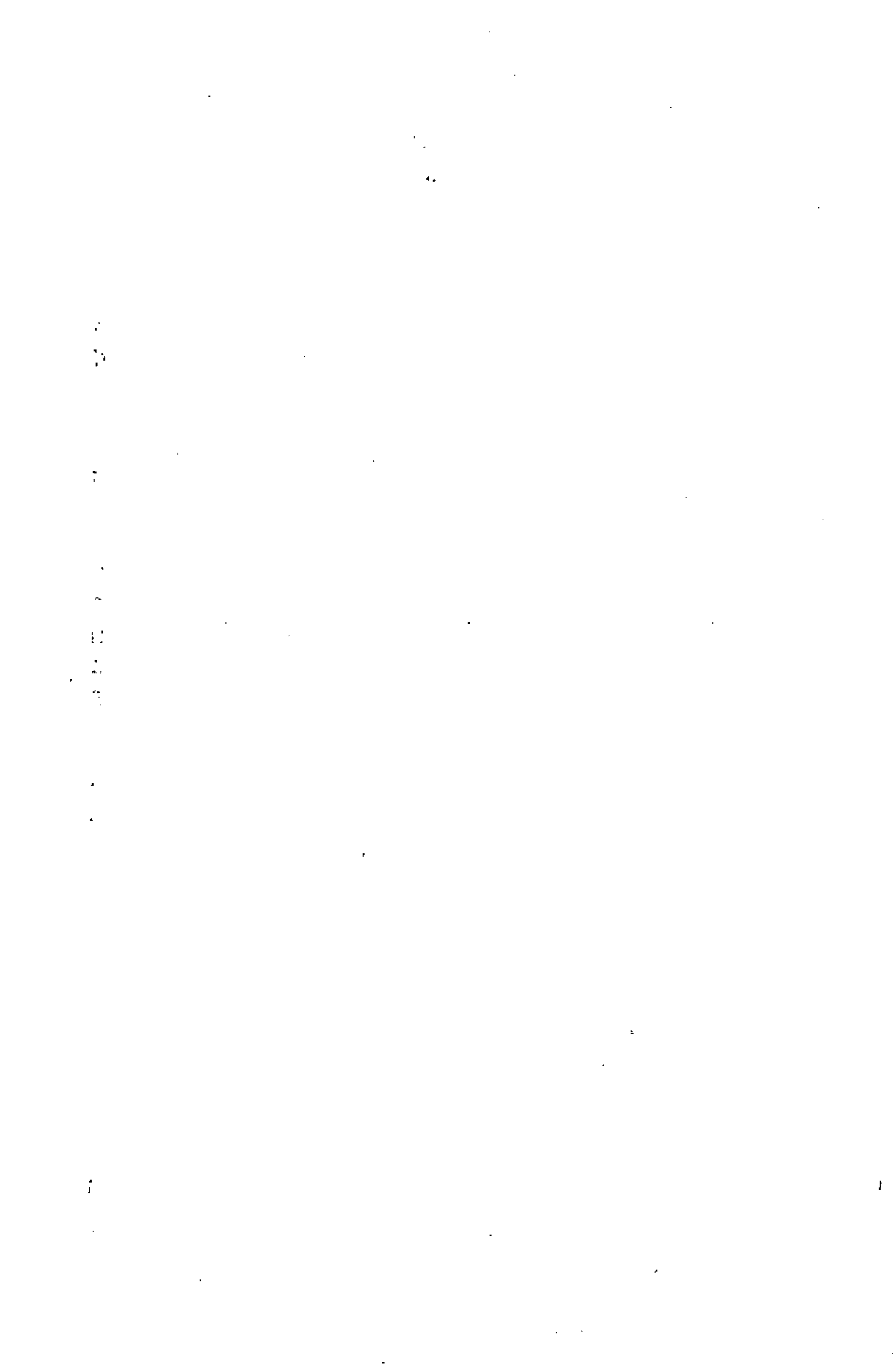
Prof. Dr. Raifa Ahmed Hassanein

Professor of Plant Physiology,
Faculty of Science,
Ain- Shams University.

Prof. Dr. Fatma E.M. El-Quesni

Professor of Weed Biology & Control,
Botany Department,
National Research Centre.

Date: / /2001



ABSTRACT

Name : Faida Ahmed Ahmed Sharara

Title : Physiological effects of certain herbicides on *Vicia faba* plant and some of its associated weeds.

Degree : Doctor of Philosophy
Submitted to: Botany Department, Faculty of Science, Ain Shams University .

In the present investigation pot and field experiments were carried out to study the effect of pre emergence soil treatments with linuron and metribuzin herbicides at the recommended concentration (R) and half the recommended concentration (1/2 R) on *Vicia faba* plant and some of its associated weeds . The pot – experiment was performed under the wire screen of the National Research Centre , Dokki, Giza to investigate the effect of the above herbicides on the growth and metabolism of the crop; *Vicia faba* and the two weeds; *Beta vulgaris* and *Malva parviflora*. Growth measurements were recorded at stages A,B& C which corresponded to 7,14& 21 days after sowing for both bean and weed plants . The photosynthetic pigments , carbohydrate constituents, element contents and protein content were determined for both bean and weed plants. The field experiment was carried out at the Agricultural Experimental Station of the National Research Centre , Shalakan, El- Kalubia. . Growth measurements of *Vicia faba* plants were determined at 30,60& 90 days after sowing, while the mean number of the most common weeds (annual broad – leaved, annual grasses, perennial broad – leaved and perennial grasses) per m²

and the mean fresh and dry weights of them were recorded at 45 and 75 days after sowing . At harvest , the yield and the yield components were recorded. Changes in carbohydrate contents, element contents, amino acids composition, protein electrophoretic patterns and the residual herbicides in the seed yield of control and differently treated plants as well as those resulted from hand hoeing treatment were studied. It has been found that the hand hoeing treatment provided the best results in controlling the annual and perennial weeds. It also gave the highest productivity. In addition, the seed yield in case of hand hoeing treatment was found to be free from the herbicidal residues, however the remaining residues of linuron and metribuzin herbicides were detected in much higher amount in 100 g testa than in 100 g cotyledons in the same harvested seeds resulted from parents treated with the same herbicides. Such response was much more pronounced using metribuzin compared with linuron and by applying the recommended dose rather than half the recommended one.

Key words: *Vicia faba* - *Beta vulgaris* - *Malva parviflora* - linuron – metribuzin- ureas- triazines-growth-yield- photosynthesis- carbohydrates- amino acids- protein electrophoretic patterns – elements- residual herbicides