



شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
على هذه الأفلام قد أعدت دون أية تغييرات



يجب أن

تُحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من 15-25 مئوية ورطوبة نسبية من 20-40%

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



شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم

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**MORPHOLOGICAL AND CHEMICAL
IDENTIFICATION OF NEW VARIETIES OF SOME
FIELD CROPS**

By

NEMAT ADLY NAGUIB

B. Sc. Agric. (Agronomy), Ain Shams Univ., 1978

M.Sc. (Agronomy), Cairo Univ., 1991

A thesis submitted in partial fulfillment

of

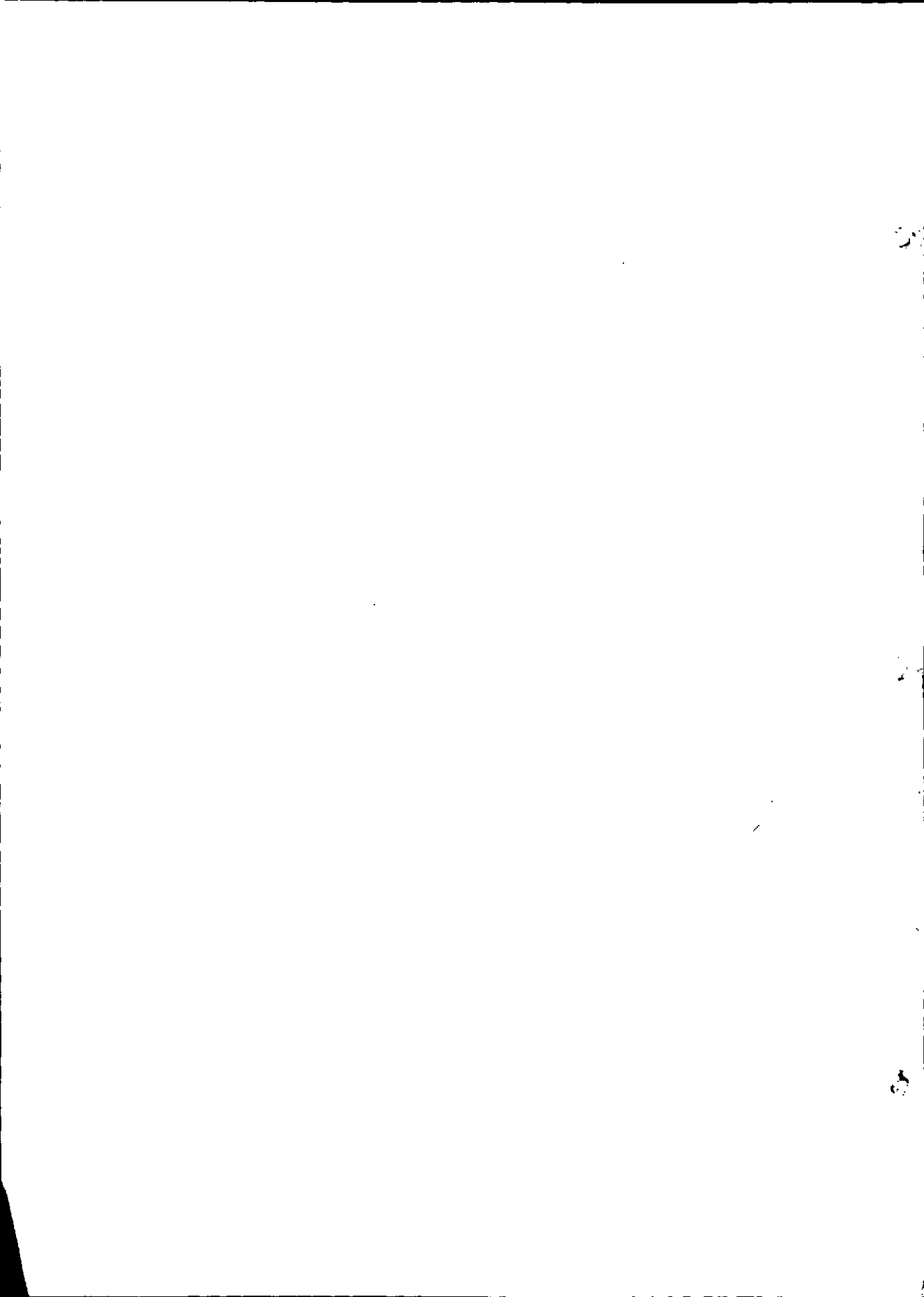
the requirements for the degree of
DOCTOR OF PHILOSOPHY

in

AGRICULTURAL SCIENCE
(Agronomy)

Department of Agronomy
Faculty of Agriculture
Ain Shams University

2000



APPROVAL SHEET

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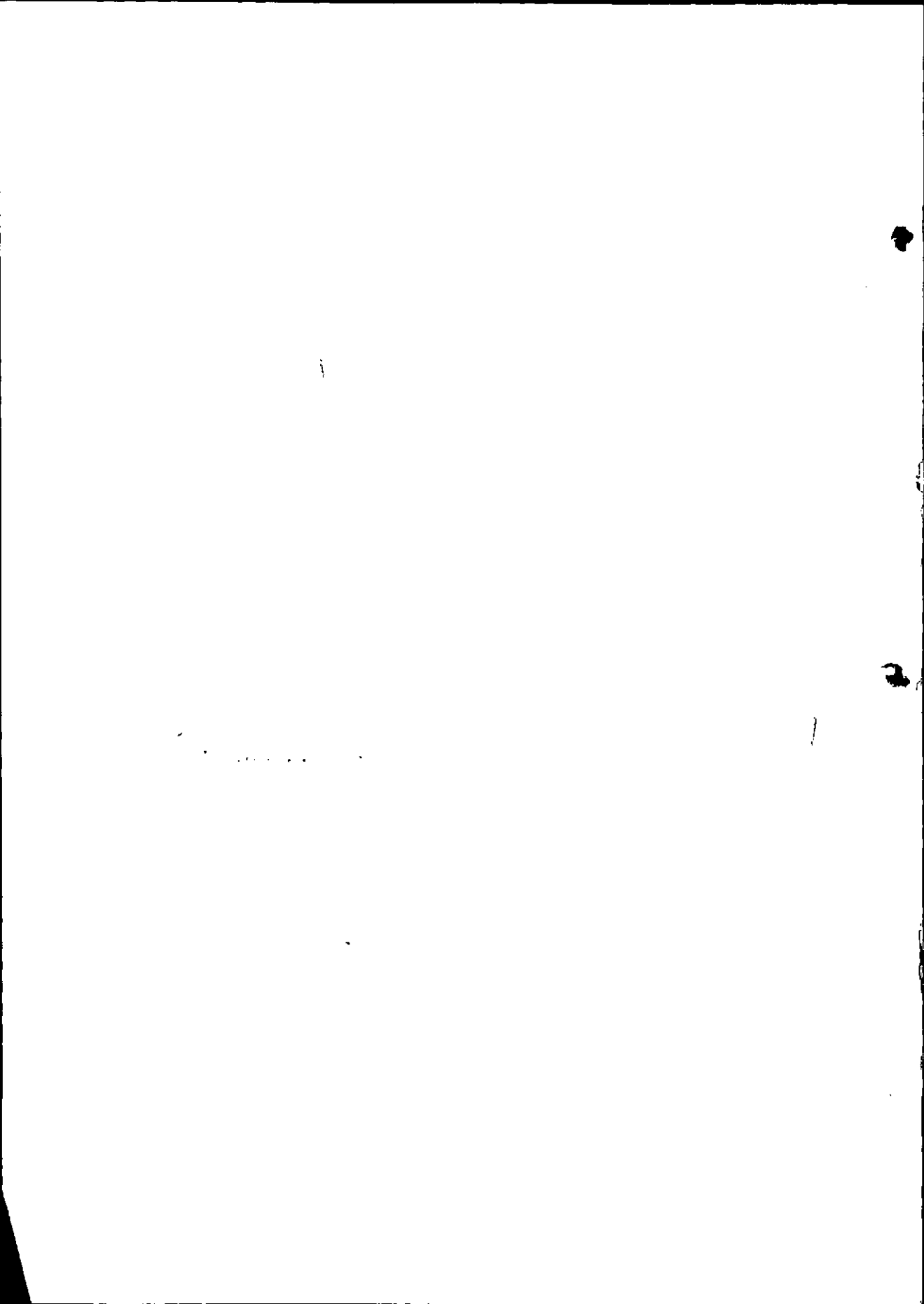
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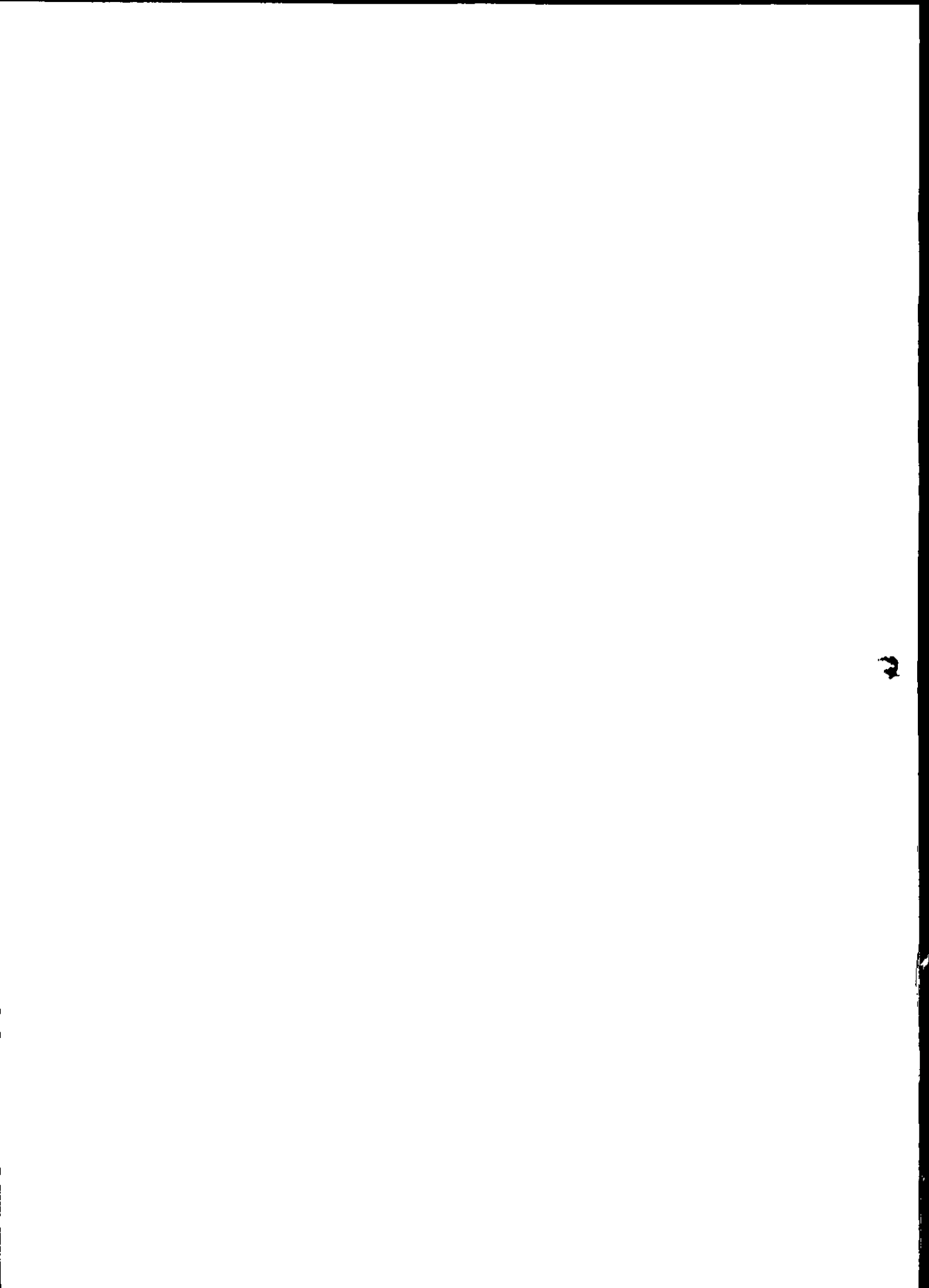
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ABSTRACT

Nemat Adly Naguib. Morphological and chemical identification of new varieties of some field crops. Unpublished Ph.D. Dissertation, University of Ain Shams, Faculty of Agriculture, Department of Agronomy, 2000.

This study was carried out with the objectives of determining the actual differences between various crop genotypes under test at different stages of growth. The necessity for such information was to assist identifying these genotypes in the quality control and certification tests. Seven faba bean (*Vicia faba* L.) genotypes (Giza 461, Giza 402, Giza 716, Giza Blanka, Line 40/93, Triple white and Bakestani), three peanut (*Arachis hypogaea* L.) genotypes (Giza 4, Giza 5 and Hybrid 8), four sesame (*Sesamum indicum* L.) genotypes (Giza 32, Hybrid 55, Hybrid 102 and New arrival 256), two onion (*Allium cepa* L.) genotypes Giza 6 Mohassan and Giza 20 were selected to test for possible varieties identification. Certain selected quantitative and qualitative characters were studied. The various crop genotypes involved in this study were selected because some of them are already registered and their seeds are marketable, the other genotypes are promising and their registration in process. Certain quantitative and qualitative morphological characters were investigated on seed, seedling and adult plants. The results revealed great differences in certain morphological characters between various genotypes and could be used to assist in the quality control and seed testing. In addition, chemical composition including crude protein, total carbohydrates, crude oil and fatty acids were tested in seeds. Moreover, the patterns of seed protein were studied by using SDS-PAGE. It was found that each genotype was characterized by proteins with specific molecular weight. Therefore, electrophoretic analysis is an important tool for the identification of cultivars.

Key words:

Faba bean, Peanut, Sesame, Onion, Identification, Quantitative characters, Qualitative characters, Electrophoresis,

AKNOWLEDGEMENT

I do thank **ALLAH** for all gifts, which have given to me.

I would like to express my most sincere gratitude to **Prof. Dr. Olfat Hassan El-Bagoury**, Professor and Head of Agronomy Department, Faculty of Agriculture, Ain Shams University for her supervision, valuable guidance, continuous support and encouragement. Also special gratitude for her technical advice, teaching and useful discussion.

I would like to express my most sincere gratitude to **Dr. Mohamed S. El-Habbal**, Professor of Agronomy, Agronomy Dept., Faculty of Agric., Ain Shams Univ. for his continuous supervision, precious guidance, helpfulness, kind help and valuable comments through the course of this study.

My great appreciation and deepest gratitude to **Dr. Mahmoud I. El-Emery**, Head Researches and Head of Seed Technology Research Section, Field Crop Research Institute, Agricultural Research Center, for his supervision, valuable help and kind advice throughout the progress of laboratory experiments and during the preparation of the manuscript concerning the technology section and for his help in writing the thesis.

My special gratitude to all staff of Agronomy Department, Faculty of Agriculture, Ain Shams University.

I would like to express deep thanks for staff members of the Seed Technology Research Department for their help and facilities during this work. Also my thanks to the Onion Research Department, the Food Legumes Research Department and the Oil Crop Research Department, Field Crop Research Institute, Agricultural Research Center, Giza. for their help, providing materials and facilities during this work.

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