بسم الله الرحمن الرحيم

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 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 والميكروفيلم

MORPHOLOGICAL AND CHEMICAL IDENTIFICATION OF NEW VARIETIES OF SOME FIELD CROPS

By

NEMAT ADLY NAGUIB

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

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

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Faculty of Agriculture

Ain Shams University

2000

APPROVAL SHEET

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This thesis for the Ph.D. Degree has been approved by:

Prof. Dr. Mohamed Ali Mohamed Rizk Mohamed Ali Rizk

Professor of Agronomy, Fac. of Agric., Al-Azhar Univ.

Prof. Dr. Nemat Abd El-Aziz Nour El Din Nemat A. Nour El Din

Professor of Agronomy, Fac. of Agric., Ain Shams Univ.

Prof. Dr. Olfat Hassan El-Bagoury Olfat El Bagoury

Professor and head of Agronomy Dept., Faculty of Agric., Ain Shams Univ. (Supervisor)

Date of examination: 15/8/2000

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Under the Supervision of:

Prof. Dr. Olfat Hassan El-Bagoury

Prof. and Head of Agronomy Dept., Faculty of Agriculture, Ain Shams Univ.

Prof. Dr. Mohamed S. El-Habbal

Professor of Agronomy, Faculty of Agriculture, Ain Shams Univ.

Prof. Dr. Mahmoud I. El-Emery

Head Researches and Head of Seed Technology Research Dept., Field Crops Research Institute, Agricultural Research Center, Giza.

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 Unpublished Ph.D. Dissertation, University of Ain Shams, Faculty of Agriculture, Department of Agronomy, 2000.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,

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LIST OF CONTENTS

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No	Tittle	Page
1	**INTRODUCTION**	**1**
2	**REVIEW OF LITERATURE**	**4**
2.1	Faba bean (*Vicia faba L.*)	4
2.1.1	Morphological studied.	4
2.1.2.	Chemical characters.	8
2.2.	Peanut (*Arachis hypogaea L.*)	12
2.2.1.	Morphological studied.	12
2.2.2.	Chemical characters.	14
2.3.	Seasme (*Sesamum indium L.*)	18
2.3.1.	Morphological studied.	18
2.3.2.	Chemical characters.	21
2.4.	Onion (*Allium cepa L.*).	22
2.4.1.	Morphological studied.	22
2.4.1.	Chemical characters.	22
3.	**MATERIALS AND METHODS.**	**25**
4.	**RESULTS AND DISCUSSION.**	**34**
4.1.	Faba bean.	34
4.1.1.	Qualitative characters.	34
4.1.2.	Quantitative characters.	39
1.	Seedling characters.	39
2.	Leaflet characters.	41
3.	Number of flowers/inflorescence.	43
4.	Days to 50 % flowering.	43
5.	Days to maturity.	45
6.	Plant height.	45
7.	Stem thickness.	47
8.	Number of branches/plant.	47
9.	Height of the lowest pod.	47

10.	Number of pods/nods.	49
11.	Pod characters.	49
12.	Seed characters.	49
4.1.3.	Chemical composition.	51
4.2.	Peanut.	58
4.2.2.	Qualitative characters.	58
4.2.2.	Quantitative characters.	63
1.	Seedling characters.	63
2.	Leaflet characters.	63
3.	Plant height.	65
4.	Number of branches/plant	65
5.	Plant width	65
6.	Ligule length.	67
7.	Number of days to 50 % flowering.	67
8.	Pod characters.	67
9.	Seed characters.	70
4.2.3.	Chemical composition.	72
4.3.	Seasme.	79
4.3.1.	Qualitative characters.	79
4.3.2.	Quantitative characters.	79
1.	Seedling characters.	79
2.	Leaf characters.	81
3.	Days to 50% flowering.	81
4.	Days to maturity.	81
5.	Number of branches/plant	83
6.	Plant height.	83
7.	Stem thickness.	83
8.	Number of capsule/plant	83
9.	Height of first capsule	83
10.	Capsule characters.	86