



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



شبكة المعلومات الجامعية
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شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



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 تغييرات



يجب أن

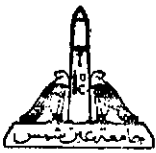
تحفظ هذه الأفلام بعيدا عن الغبار

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بعض الوثائق الأصلية تالفة

بالرسالة صفحات لم ترد بالاصل



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**PHYSIOLOGICAL STUDIES ON
LENTIL PLANT "Lens culinaris
Medik" CULTURED IN VITRO**

THESIS

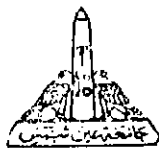
**Submitted in partial fulfilment for
the Degree of M.Sc. in Botany
(Tissue culture)**

BY

**Usama Ibrahim Ali Ibrahim
(B. Sc. 1991)**

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

1996



PHYSIOLOGICAL STUDIES ON LENTIL PLANT "Lens culinaris Medik" CULTURED IN VITRO

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Usama Ibrahim Ali Ibrahim
B. Sc. (BOTANY-CHEMISTRY), 1991

Thesis submitted for M.Sc. in Botany (Tissue culture)

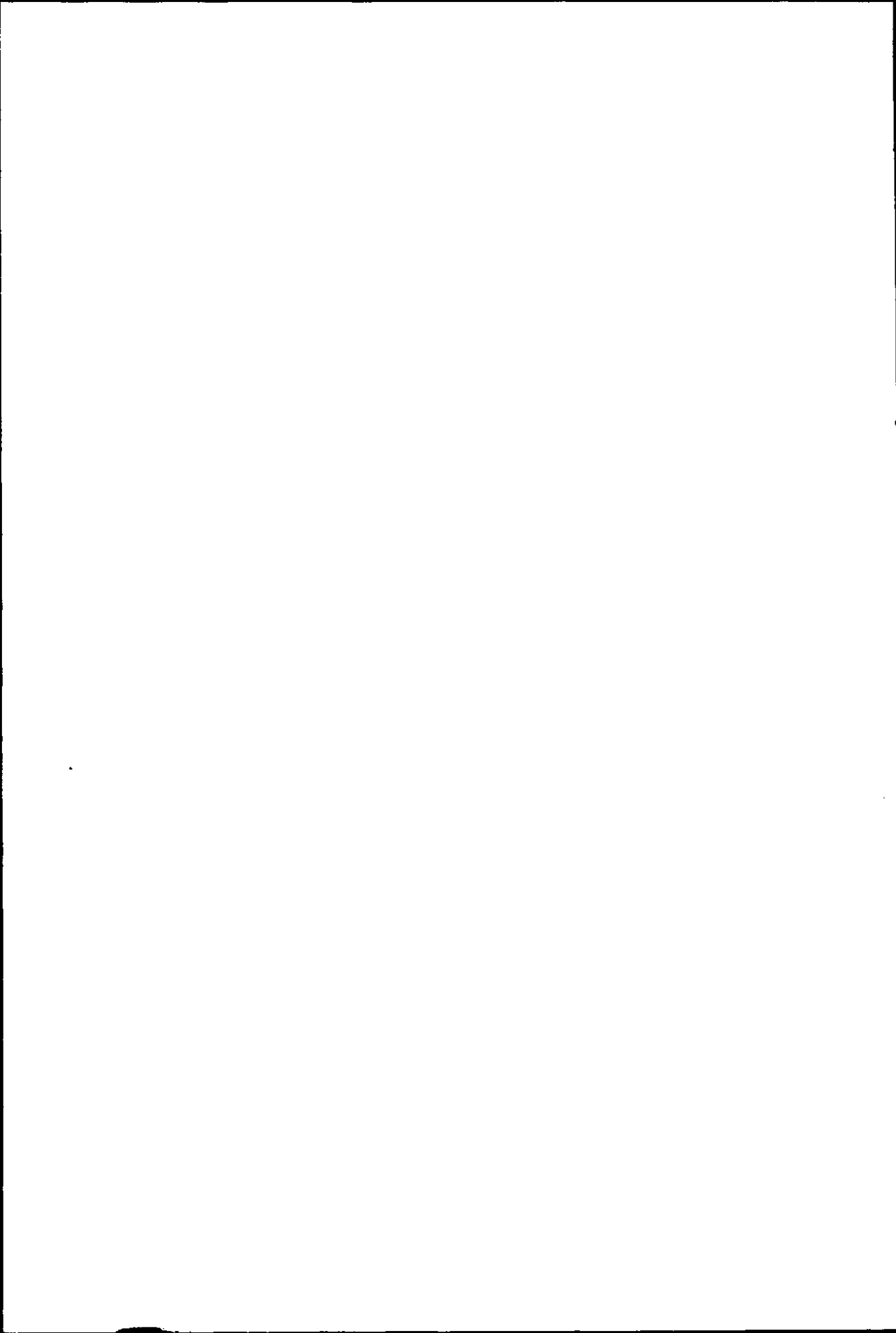
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1996



ABSTRACT

This study aimed to investigate the following points :

(1) Establishment of calli cultures from different explants of lentil (Lens culinaris Medik) using different concentrations of 2,4-D either alone or in combination with kin or BA. Moreover, the proliferation of callus under saline conditions was induced. (2) Salinity stress studies using NaCl and ASM (artificial salt mixture). (3) Attempts to regenerate lentil plantlets either indirectly from callus tissues or directly from different explants.

Key words :

Lentil , Lens culinaris , In vitro , Callus , Regeneration , Salinity , Protein pattern.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in financial matters. The text outlines various methods for organizing and storing data, including digital databases and physical filing systems.

2. The second section focuses on the role of communication in project management. It highlights the need for clear, concise, and timely communication between all stakeholders involved in a project. The text provides guidelines for effective communication, such as using appropriate channels and formats, and encourages regular updates and reporting.

3. The third part of the document addresses the challenges of resource allocation and management. It discusses the importance of understanding the capabilities and limitations of available resources, and provides strategies for optimizing their use. The text also touches upon the need for flexibility and adaptability in response to changing circumstances.

4. The final section discusses the importance of risk management and contingency planning. It emphasizes the need to identify potential risks early on and develop strategies to mitigate them. The text provides a framework for assessing risks and developing contingency plans, and encourages a proactive approach to risk management.

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LIST OF ABBREVIATIONS

BA	6-Benzyl amino purine.
2,4-D	2,4-Dichlorophenoxyacetic acid.
DM (%)	Dry matter percentage.
DW	Dry weight.
FW	Fresh weight.
GA ₃	Gibbrellic acid.
GR	Growth rate.
GV	Growth value
IAA	Indol-3-acetic acid.
IBA	Indol-3-butyric acid.
Kin	Kinetin (6-furfuryl amino purine).
MS	Murashige and Skoog medium.
NAA	1-Naphthalene acetic acid.

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