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شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم



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شبكة المعلومات الجامعية



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



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شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
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بالرسالة صفحات لم ترد بالأصل



**A COMPARATIVE STUDY ON GRCWTH, YIELD AND
NUTRITIVE VALUE FOR SOME FORAGE PLANTS
GROWN UNDER DIFFERENT LEVELS OF SALINITY**

THESIS

Submitted For the Degree of

DOCTOR OF PHILOSOPHY

in

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(Ecology)

By

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APPROVAL SHEET

Title of the Ph.D Thesis

**A COMPARATIVE STUDY ON GROWTH, YIELD AND
NUTRITIVE VALUE OF SOME FORAGE PLANTS
GROWN UNDER DIFFERENT LEVELS OF SALINITY**

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Abstract

Name: Medhat Mekhail Tawfik

Title of thesis: A comparative study on growth, yield and nutritive value of some forage plants grown under different levels of salinity.

Degree [Ph. D.] Faculty of Science, Cairo University, 2001.

Two pot experiments were conducted in the halophytic green-house of the National Research Center, Dokki, Giza in 1996 and 1997 growing seasons to study the effect of irrigation with diluted seawater on growth, some physiological aspects and yield of *Medicago sativa* L. and three halophytic forage plants.

Each experiment included 16 treatments which were the combinations of four levels (12.5, 25.0, 37.5 and 50.0%) of seawater and four plant species, i.e. *Medicago Sativa* L., *Leptochloa fusca* (L.) Kunth, *Sporobolus virginicus* (L.) Kunth and *Salicornia europaea*.

Four cuttings were taken in 3 month intervals each season and the effect of different salinity level on plant height, fresh weight, dry weight, succulence, photosynthetic pigments content, soluble carbohydrates potassium, Na/K ratio, cell sap concentration and Osmotic potential were studied in each cutting.

Key Words: Halophytes seawater salinity *Medicago* growth yield succulence photosynthetic pigments soluble carbohydrates crude protein proline sodium potassium Na/K ratio osmotic potential salt glands.

Supervisors

1-

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This thesis has not been
previously submitted for
any degree at this or any
other University

To the spirit of my great mother in law

My kind parents

My lovely wife

My wonderful children

To my family

To MANAL

MOUSHER

MAGED

I thank you

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INTRODUCTION