



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

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الأصلية تالفه

SOME CHEMICAL STUDIES ON NORTH DELTA SOILS

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THESIS

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بَرَفَعِ اللَّهُ الْكَافِرِينَ أَهْمَنُوا مِنْكُمْ وَالْكَافِرِينَ

أَوْفُوا الْعِلْمَ كَرِجَاتٍ

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INTRODUCTION

1. INTRODUCTION

In Egypt, irrigation water resources are limited as a result of agricultural expansion in newly reclaimed lands. So, optimizing the use of non traditional water resources of irrigation is very important.

The non-traditional water resources in Egypt are, agricultural drainage water and treated municipal sewage water. Available water resources present amount to 63.5 billion m³/year. These are classified as follows:

Sources	Quantity in billion cub m/year	
	Present 1990	By year 2000
River Nile water	55.5	57.5 (First stage of jungle complete)
Ground water (Nile valley & Delta)	2.6	4.9
Agricultural drainage water	4.7	7.0
Treated municipal sewage water	0.2	1.1
Saving flow water management programs	-	1.0
Deep ground water (deserts)	0.5	2.5
	63.5	74.0

*After El-Sherbini *et al.* (1992)

The poor quality of irrigation water adversely affects growth and productivity of any crop. The use of saline water in irrigation was found to have a harmful effect on plant physiological processes which led to a marked reduction in growth, yield and the chemical properties of soil. Such harmful effect depends on the salinity level and the growth stage of its application.

In field experiment, using natural or synthetic saline water in irrigation processes can reduce the growth of maize plants, consequently reduction in, dry weight/plant, dry matter yield and grain yield and its components. Maize plants is one of those plants known to be very sensitive to salinity. The use of low quality of irrigation water can reduce plant growth, dry matter and grain yield (El-Karmity *et al.* 1997).

The aim of the present study was to define the effect of the quality of irrigation water on some chemical properties of the North-Delta soils under different N-levels and on the yield, yield components of maize plants. On the other hand, there was another aim this was to save some water to use in planting new areas.

**REVIEW
OF
LITERATURE**