بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

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

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

B 1-502

Response of Some Canola varieties to Modern Systems of Irrigation and Fertilization on the Newly Reclaimed Soils

By

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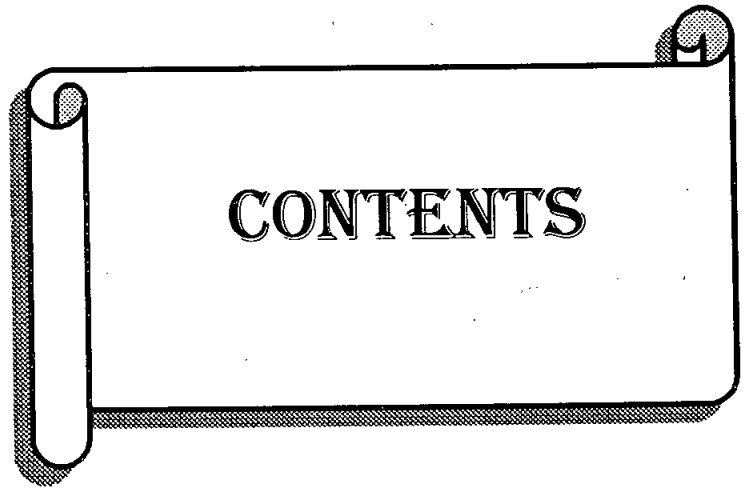

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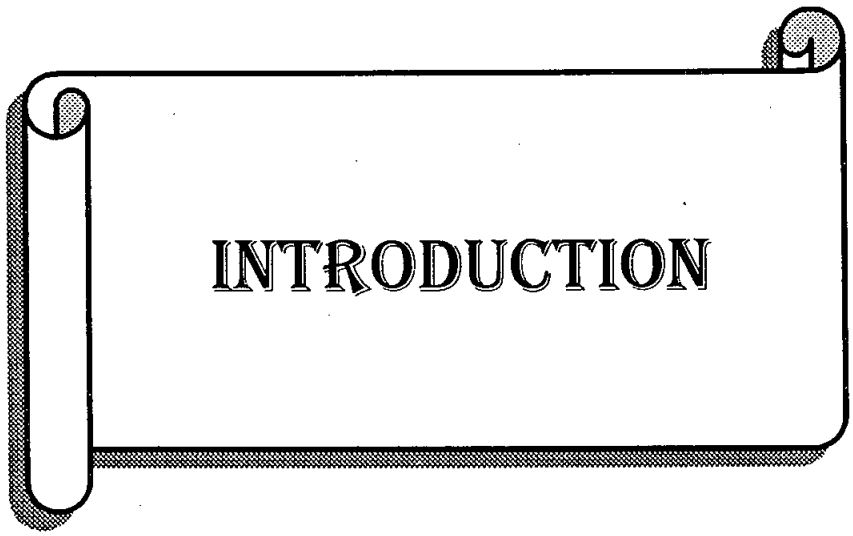
INTRODUCTION

I- INTRODUCTION

Total oil consumption in Egypt has increased drastically as a result of the overall population growth which exceeds 2.1 percent/year. Therefore, the consumption reached more than 1.100.000 MT by the year 2002. However, the local production did not exceed 150.000 MT. This means that percentage of production amounted to be less than 10% of the total consumption. This reflects the size of the problem and shows the need for horizontal expansion by increasing oil crops area not on the account of the cultivated areas in Delta and Valley which are now intensively cultivated but through the desert area. Therefore, the prime solution in this respect is the direction to desert land which represents 96% of Egypt total area. Through this area the available desert area for cultivation is amounted to be nearly 80 millions fed. Then, the prime objective of this study depends mainly on two important factors. Firstly, invading desert land by cultivating the majority of oil crops which, in turn, encourages the investment in such area. Productivity of such area is fairly good whenever the nutritional and irrigation problems are solved. Some of the major problems that should be faced are lower water holding capacity, high $CaCO_3$ content, poor fertility status, high leaching capacity and inactivation of phosphatic fertilizers. Taking the above mentioned problems into consideration in addition to the limitation of water resources, emphasis should be directed through finding proper systems of irrigation and fertilization management through a network of sprinkler and drip systems of irrigation. These systems enhance the rationalization of irrigation water to the limits of evapotranspiration to achieve the best irrigation water use efficiency (WUE). Secondary, introducing new oil crops in desert land of Egypt such as the winter oil crop; canola. Canola not rapeseed is an oil seed crop which is grown primarily in regions of

Western Canada with some acreage being planted in the North and Southeast of United States. The seeds contain about 40% oil. The remainder of the seed is processed into canola meal with high protein to livestock feed. Nutrition experts recognize canola oil as having the best fatty acid profile of any edible oil. It is characterized by less than 2% erucic acid and higher percent of oleic acid which has been shown to reduce serum cholesterol and LDL levels. In addition it contains a moderate percent of the essential fatty acids such as linoleic and alpha-linolenic as stated by **Canola Council of Canada (1998)**.

The managements of canola in Egypt particularly on desert land which is sandy calcareous are scanty so far. Therefore, the need for precise planting managements for canola in Egyptian desert have been solicited. Thus, the present research is concerned with studying the response of some canola varieties as conditioned by modern systems of irrigation, population density and fertilization on the newly reclaimed soils. Accordingly, the current study was an attempt to manifest the best and precise managements for some canola varieties in sandy calcareous soil. Furthermore to maximize canola seed production per unit volume of irrigation water owing to the limitation of water resources in Egypt.