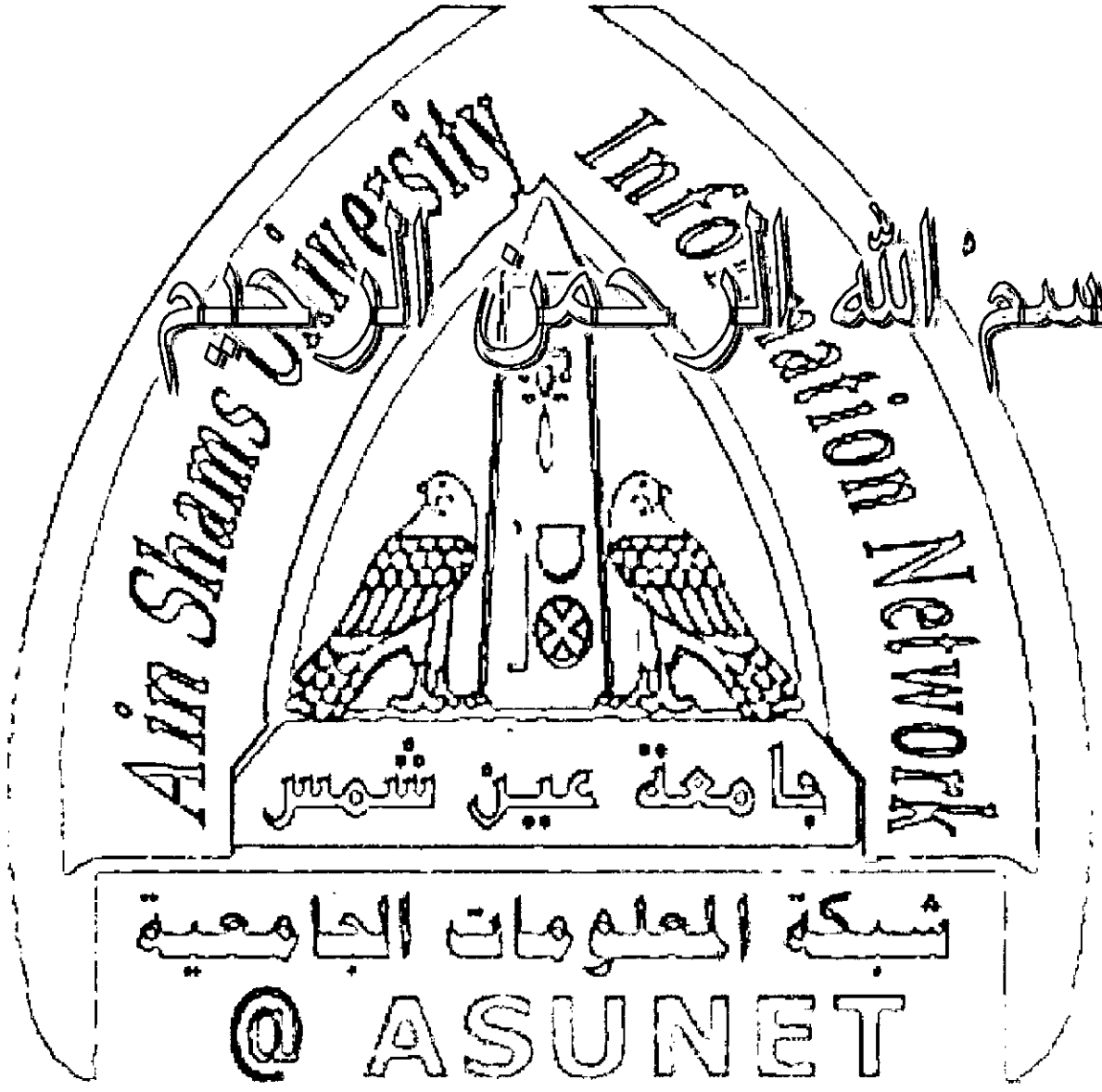
شبكة المعلومات الجامعية



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 تغيرات

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

بعض الوثائق الأصلية تالفة

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شبكة المعلومات الجامعية
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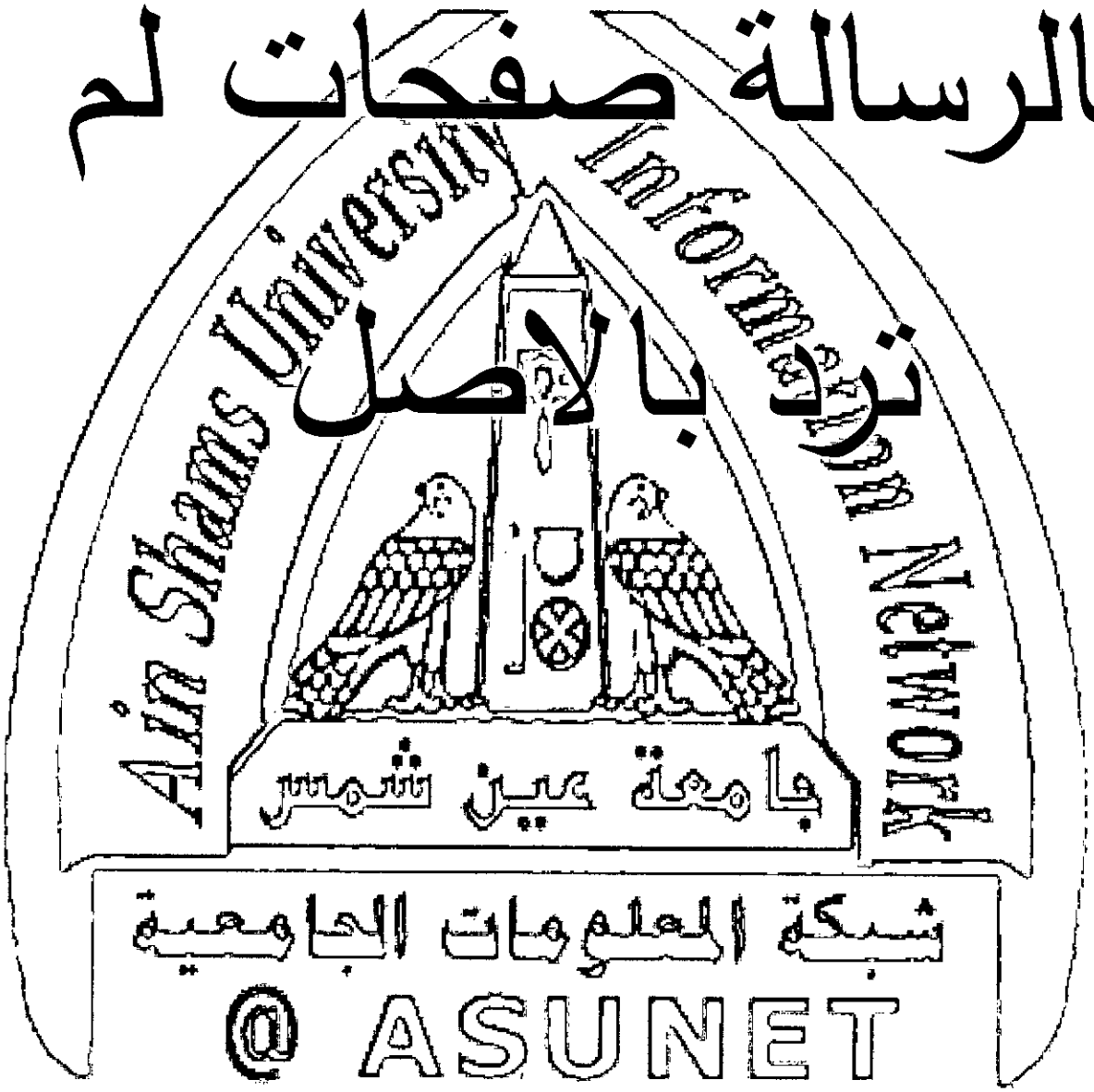
بالرسالة صفحات لم ترد بالاصل



Breeding for drought tolerance in some grain sorghum genotypes and their hybrids.

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THESIS

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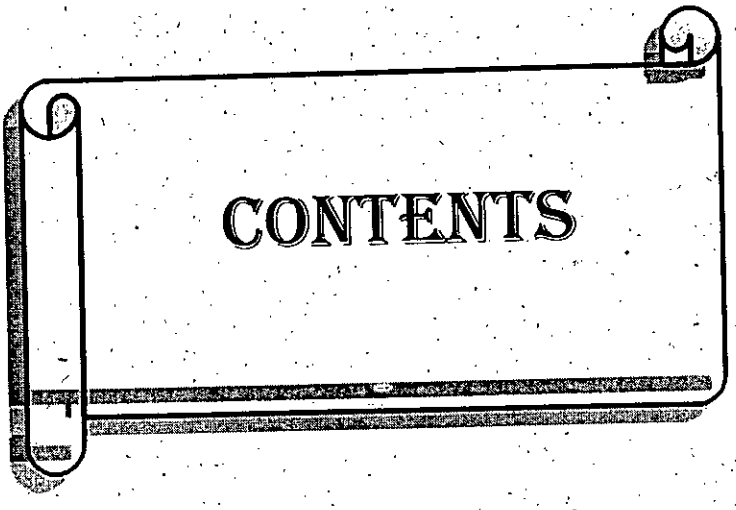
Committee in charge

Date : 27 / 5 / 2004.

وعلمك ما لم تكن تعلم
وكان فضل اللّه عليك عظيما



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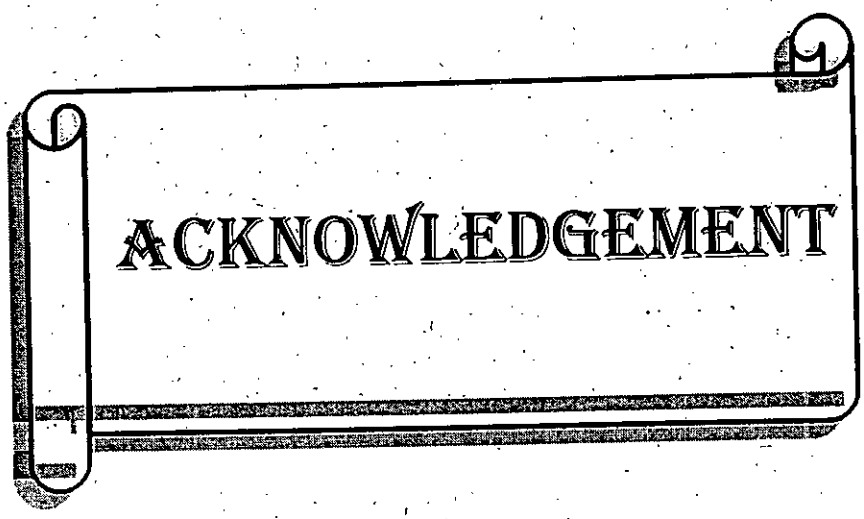

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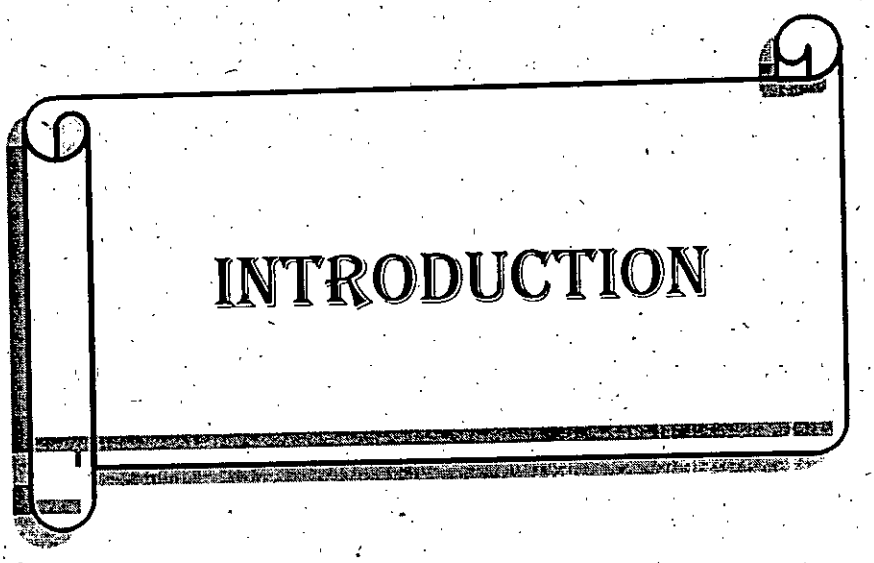
INTRODUCTION

INTRODUCTION

Sorghum (*Sorghum bicolor* L. Moench) is commonly grown in the semiarid areas where production is almost limited by severe water stress. Therefore, grain sorghum becomes an important cereal particularly in the semi-arid tropic areas where it has become a vital source of food for millions of people around the world. It is used for feeding animals, as an industrial raw material in addition to complementing other cereals as a primary food grain for human beings. Improving drought tolerance in sorghum would be a major contribution toward increasing and stabilizing grain sorghum yield as a food production in harsh environmental areas world wide where increasing populations and food demands are big problems that are likely to worsen with time. The small farmer is the first who feels the dual pressures of increased demand and limited supply of production resources. Therefore, improving sorghum yields and increasing its production efficiency at the same times are especially vital to him.

The water deficiency problem is the most important production limitation in Egypt, where has both agricultural and living area are concentrated in the Nile valley. Nile water is not sufficient to satisfy increasing water demands. All these sources of water are still not enough to meet increasing demands. Although, the water demand has increased yet agreement between the Nile valley nations gives Egypt, the same quantity of water since 1920. The expectation in the future is fighting for water. Therefore, water has to be used more efficiently and wisely. Emphasis must be placed on a staple cereal, which can attain high yield under stress conditions.

Sorghum ability to survive and tolerate water stress condition make it the most promising crop for improving water use efficiency among other cereal crops. It is decisive to develop and adapt new technologies to expose variability among sorghum genotypes for stress resistance and to identify