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جامعة عين شمس

التوثيق الالكتروني والميكروفيلم



نقسم بللله 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 %



ثبكة المعلومات الجامعية





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GENETIC STUDIES ON SOME FLAX PROPERTIES UNDER SOME ENVIRONMENTAL STRESSES

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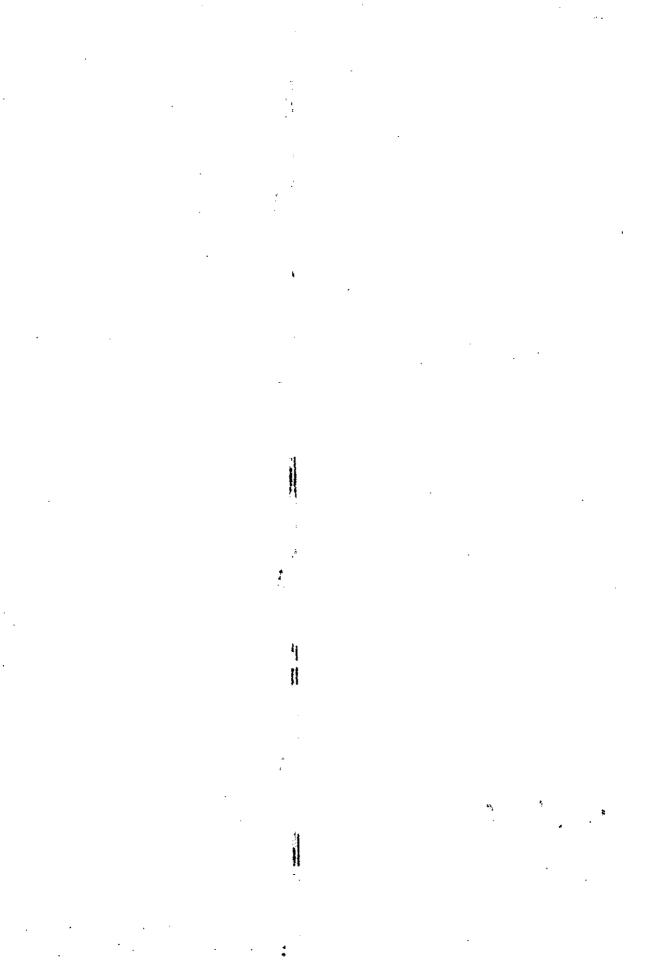
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Department of Genetics Faculty of Agriculture Ain Shams University (1998)

Bryn



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TO My entire life

Mahmoud and Shatha

I give my success if any; telling them

"Mammy is Back"



ABSTRACT

Naglaa Abdel-Monem Mahmoud Ashry, Genetical studies on some flax properties under some environmental stresses, Unpublished Doctor of philosophy, Genetics, Fac. of Agric., Ain Shams Univ. 1998.

Eleven flax (Linum usitatissimum L₂) genotypes were selected from twenty-six lines which were evaluated for salt tolerance at germination, vegetative and maturity stages. Two genotypes were selected, including the most tolerant (S.162/3) and the most sensitive (Giza 6) genotypes. They were planted with their F_1 and its reciprocal and F_2 , in sand culture experiment under control (0) and 6000 ppm NaCt and were evaluated at both vegetative stage (at 60-days) and at maturity. Physiological, biochemical, molecular and anatomical studies were conducted. F_2 plants were sorted into ten groups according to four yield-related traits and a visual rank for plant vigor, and the two extreme groups (the most tolerant vs. the most sensitive) were examined as individual plants.

The tolerant parent (S. 162/3) proved to be a good combiner for two yield related traits. It accumulated more profine than the sensitive one. The same behavior was observed in F₂ tolerant grnotypes. Isozymes of peroxidase, acid phosphatase and esterase showed polymorphic differences with salt treatment and some biochemical genetic markers for salt tolerance in flax. RAPD markers using PCR, generated a molecular marker for salt tolerance in flax (primer D10). Anatomical studies showed that root cross section especially cortex area may be used as dignostic criteria for salt sensetive genotypes in flax.

Key words: Flax, Limin usitatissimum, Stress, SDS-protein banding paterns, Isozyme polymorphism, Peroxidase, Esterase, Acid phosphatase, Bulked segregant Analysis (BSA), RAPD-marker.

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