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

GENETIC STUDIES ON SOME FLAX PROPERTIES UNDER SOME ENVIRONMENTAL STRESSES

By

NAGLAA ABDEL-MONEM MAHMOUD ASHRY
B.Sc. in Agric Sci.(Genetics), Fac. of Agric., Ain Shams Univ., (1981)
M.Sc. in Agric. Sci.(Genetics), Fac. of Agric., Ain Shams Univ.,(1991)

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Faculty of Agriculture
Ain Shams University
(1998)

APPROVAL SHEET

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This thesis for Ph.D. degree has been approved by:

Prof. Dr. M.El-Farouk Mahmoud M. El-Farouk

.....
Professor of Agronomy,
Director of Fiber Crops Dept.
Field Crops Research Inst., A.R.C.,Egypt.

Prof. Dr.Fatthy M. Abdel-Tawab

.....
Professor of Molecular Genetics,
Dept. of Genetics, Fac. of Agric.
Ain Shams University. F.M. Abdel-Tawab

Prof. Dr. Abdel-fattah A. Tayel
Professor of Genetics,Dept.
of Genetics, Fac. of Agric.
Ain Shams University (Supervisor) .....A.A. Tayel

Date of examination --/--/1998

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Under the Supervision of

Prof. Dr. A.A. Tayel
Prof of Genetics,
Dept. of Genetics, Fac. of Agric.
Ain Shams University.

Prof. Dr. G.H. El-Shimy
Prof. of . Agronomy,Fiber Crops Dept.,
Field crops institute, Agric. Res. Center.

Dr. Eman M. Fahmy
Assoc. Prof.of Molecular Genetics.
Dept. of Genetics, Fac. of Agric.
Ain Shams University.

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Naglaa Abdel-Monem Mahmoud Ashry, Genetical studies on some flax properties under some environmental stresses, **Unpublished Doctor of philosophy, Genetics, Fac.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* L,) 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 NaCl 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 proline than the sensitive one. The same behavior was observed in F_2 tolerant gnotypes. 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, *Linum usitatissimum*, Stress, SDS-protein banding paterns, Isozyme polymorphism, Peroxidase, Esterase, Acid phosphatase, Bulked segregant Analysis (BSA), RAPD-marker.