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

PHYSIOLOGICAL GENETIC STUDIES ON IRRADIATED POTATO PLANTS BY THE USE OF BIOTECHNOLOGY

By

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B.Sc. Agric. Sci. (Genetics), Ain Shams Univ., 1973
M.Sc. Agric. Sci. (Genetics), Ain Shams Univ., 1993

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Faculty of Agriculture
Ain Shams University

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APPROVAL SHEET

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ABSTRACT

Hoda Mohamed El Demerdash, Physiological Genetic Studies on irradiated Potato Plants by the use of Biotechnology. Unpublished Ph.D. Dissertation, Genetic Dept., Fac. of Agric, Ain Shams Univ., 2000.

This work deals with the effect of gamma-radiation on potato. Two cultivars were chosen; drought tolerant (Spunta), and drought sensitive (Satuma) cultivars. The study was applied using irradiation doses of 30 and 40 GY and drought stress of 12 bar. Experiments on the treated and non-treated cultivars revealed that gamma irradiation increase the ability of the tolerant cultivar Spunta plantlets to produce microtubers

SDS-protein profiles indicated the presence of 5 bands in the tolerant cultivar that can be used as biochemical genetic markers for drought tolerance in potato. Isozyme polymorphism, pattern such as esterase and peroxidase showed different responses with respect to gamma irradiation. Esterase and peroxidase showed biochemical genetic markers for drought tolerance in potato.

Bulked segregant analysis developed three RAPD markers; The 1360bp with ten mers OPC-04, and 450bp with ten mers OPD-18 as positive markers for drought tolerance in potato, and The 340 bp for OPC-04 as negative marker for drought tolerance.

Keywords: Potato, gamma-irradiation, drought tolerance, SDS – PAGE, esterase isozymes, peroxidase isozyme, PCR, RAPD, bulked segregate analysis (BSA).

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