



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



شبكة المعلومات الجامعية
@ ASUNET



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

بالرسالة صفحات لم ترد بالاصل

**PRODUCTIVITY OF SILYBUM PLANTS (*SILYBUM MARIANUM* L.)
AS AFFECTED BY SOME AGRICULTURAL TREATMENTS IN
NEW RECLAIMED REGIONS**

4824 JP

BY

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**A thesis submitted in partial fulfilment
of
the requirements for the degree of**

DOCTOR OF PHILOSOPHY

in

**Agricultural Science
(Agronomy)**

**Department of Agronomy
Faculty of Agriculture
Ain Shams University**

1995

APPROVAL SHEET

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ABSTRACT

A set of experiments were conducted in the farm of Modern Agricultural Development Company (Dina-80 km north west Cairo) during 1990 / 1991 and 1991 / 1992 seasons to investigate the response of cultivated milk thistle (*Silybum marianum* (L.) Gaertn) to row spacing and nitrogen and phosphorus fertilization, in addition to diagnose the allelopathic effects of silybum seeds and roots on germination and seedling development of certain crops.

Height, number of leaves and heads / plant, dry weight of leaves and stem / plant and seed and oil yield parameters of silybum indicate that the rates of 50 kg N/fed. and 30 kg P₂O₅/fed. are sufficient to meet the nitrogenous and phosphorus requirements with no extra benefit to any further increase in N and P rates.

Widening spacing between rows from 45cm to 60cm decreased significantly seed yield/fed. in the two successive seasons by 29.1 and 27.7 %, respectively and reduced also their oil yield by 24.3 and 27.7% for the same respective seasons.

Concentration and yield of silymarin group (the active constituents of silybum seeds) generally increased with application of 50 kg N/fed. and 60 kg P₂O₅/fed. to the plants grown in narrow row spacing.

Head circumference and weight, seed weight/head and seed oil percentage showed an increase with progress of the head in age up to 12 days for head circumference and weight, and to 16 days for seed weight.

Germination %, germination rate and seedling growth assessments of crops were varied in their response to the allelopathic activity of aqueous exudates of silybum seeds and roots. seeds exudate was more harmful than root exudate. Among maize, rosell barley, pea and fennel, squash seems to be the most susceptible crop. Whereas, radical and plumule lengths of germinated crop seeds were the most sensitive traits to the allelopathic activity of silybum.

KEY WORDS : Silybum marianum(L.) Gaertn,
new reclaimed lands, nitrogen and phosphorus fertilization, plant density,
medicinal plants, flavanolignans, fixed oil, allelopathy.

ACKNOWLEDGMENT

The author wishes to express her deep appreciation and gratitude to **Prof. Dr. Taher B. Fayed**, Professor of agronomy, Department of Agronomy, Faculty of Agriculture, Ain Shams University for his supervision, support and great help which he gave during the course of this study and for constructive criticism in the preparation of this manuscript.

Gratefulness and deep gratitude are extended to **Prof. Dr. Adel M. Abo-Shetaia** Professor of Agronomy, Department of Agronomy, Faculty of Agriculture, Ain Shams University for supervision and valuable help and advice.

Heartful thanks and my acknowledgment are due to **Prof. Dr. Salah S. Ahmed**, Professor of Medicinal and Aromatic plants, Pharmaceutical Sci. Dept., National Research Center for his supervision and his constant assistance to allow this work to be done, Many thanks are also due to **Dr. El-Sayed A. Omer**, Ass. Prof. of Medicinal and Aromatic Plants, Pharmaceutical Sci. Dept., National Research Center for his guide, advice and valuable help.

My gratitude is further expressed to the staff members and employees of Pharmaceutical Sci. DEP., N.R.C., for their kind help and encouragement. Special thanks are forwarded to Dina farm staff and also, the National Project of Medicinal and Aromatic plants for their help during preparation and cultivation part of this dissertation.

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