شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

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 الوثائـــــــق الاصليـــــة تالفـــة

بالرسالة صفحات لم ترد بالاصل

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

BY

AZZA AMIN EZZ EL- DIN

A thesis submitted in partial fulfilment
of
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Faculty of Agriculture
Ain Shams University

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APPROVAL SHEET

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Productivity of silybum plants (*Silybum marianum* L.) as affected by some agricultural treatments in new reclaimed regions.

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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 P_2O_5/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 P_2O_5/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.

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