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

Effect of some pesticides on the chemical constituents and yield of sugar beet crop

By

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B.SC. Agric.(Biochemistry) Cairo university 1998

Thesis

Submitted in partial, fulfilment of the requirments
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Department of Biochemistry
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ABSTRACT

The present study was carried out under the normal field conditions at Sakha Research Station, Kafre El-Sheikh Governorate during 1999and 2000 seasons to study the effect of the Organophosphorous (Profenofos) and the Carbamate (Carbosulfan) insecticides on the chemical constituents and yield of sugar beet with regard to the residues of both insecticides in Sugar beet roots at harvest. Plants were sprayed by three different doses of Carbosulfan insecticide (Marshal) i.e. 400, 600 (recommended) and 800 g/fed. and 650, 750 (recommended) and 850 cm^3/fed. for Profenofos (Selecron) over the planting seasons at three foliar application dates i.e. 70, 110 and 150 days from sowing.

Sugar beet root samples were taken 60, 100 and 140 days after treatments with the recommended and the high dose. Sugar beet roots insecticides were free from any detectable residues at harvest. The undetectable residues of Carbosulfan and Profenofos did not exceed the maximum residue limit (MRL) that recorded by Codex Alimentarius Commission (CAC 2000) which were 0.1 and 0.05 ppm respectively, because the limit of detection was 0.01 ppm. So it could be concluded that beet roots could be safely used for manufacturing sugar consumed by human.

Both insecticides had an insignificant effect on yield and yield components except for Profenofos that showed a significant effect on root yield with the high dose. On the other hand, both insecticides had different trends in their effect on the chemical constituents, but no severe effect on it was noticed under the different concentrations of the two insecticides.

M. I. Kobeasy

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1- INTRODUCTION

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Sugar beat ranks the second sugar crop not only in Egypt but also in the whole world around. The last two decades of the twentieth century showed a gradual increase in sugar consumption.

Nowadays, the total amount of sugar production in Egypt amounted by 1,325.000 tons, 74% of them produced by sugar cane and 26% from the two sugar beet factories in Kafr El Sheikh and Dakahlia governorate. The total gap of sugar amounted by 500,000 tons/year. This figure is considered a heavy Borden on the national balance. Since the expanding in sugar cane area is very limit, while sugar beet crop is successfully grown in a wide range of climates and different types of soils **Draycott (1972),** so the increase in sugar production could be fulfilled throughout the expanding in sugar beet area especially in the new reclaimed one.

As a matter of fact, the cultivated area of sugar beet developed from 11,000 feddan in 1981 to reach 160,000 feddan in 2001/2002 cultured season *. So, it is clearly shown that the expanding in the cultivated area is the only way to attain the self sufficient from sugar.

Sugar beet plants tended toward maturity when the plant aged 6-7 months. Because the manufacturing capacity for sugar factory is limit, and to arrange sugar beet delivery process during manufacturing seasons. The agricultural policy maker arrange sowing dates for sugar beet in the period from 1st August to 15th of November to control and arrange sugar beet harvesting and delivery. Sugar beet plants are characterized by their slow rate of growth during the early stages i.e. from emergence to singling (thinning), the expanding interval of

*Source Ministry of Agricultural the center council for sugar crops.