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شبكة المعلومات الجامعية

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شبكة المعلومات الجامعية



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



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شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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AIN-SHAMS UNIVERSITY
INSTITUTE OF ENVIRONMENTAL
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AGRICULTURAL DEPARTMENT

**THE ENVIRONMENTAL EFFECTS OF SOME HERBICIDES
ON FABA BEAN CROP AND THE FOLLOWING CROPS**

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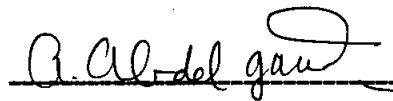
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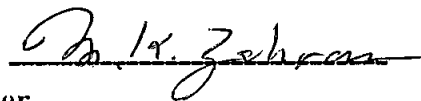
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INTRODUCTION

INTRODUCTION

Faba bean is considered as one of the most important legume crops in Egypt with respect to the cultivated area, as it is the main source of plant protein in the Egyptian diet. This is due to its low price and high nutritive value. Also such a legume crop has an important role in Egyptian agriculture as a source of nitrogen fixation through *Rhizobia* which may increase the soil fertility when this crop is included in the rotation specially in the new lands.

The total area planted with faba bean in 1992-1993 season computed to some 270,000 feddan with an average yield of 8 ardab/feddan. Several farmers produce higher yield than the average by following the scientific recommendations of Ministry of Agriculture. One of the major recommendations which increase greatly the yield of faba bean is the use of recommended herbicides. Since the spread of weeds in agricultural land still represents one of the main problems limiting the increase of agricultural production due to the competition and the allelopathic effects of weeds on the economic crop which is usually greatly affected in quantity and quality. This necessitates a good weed management scheme. In this respect all available methods should be implemented to obtain the best way for weed control i.e. cultural, mechanical and chemical. However, due to the social and economic reasons the use of herbicides has increased in the last few years as the labor wages have increased. Herbicides especially the triazine group are among the herbicides widely used in recent years to control weeds growing in the fields of faba bean in Egypt.

To safeguard the long term use of herbicides, studies on remaining residue should be carried out in the field and in the laboratory. Thus studies on the effect of the herbicide residue used in faba bean fields on the following crops should be included; also the degradation of herbicides in the soil should be monitored using the chemical or biological methods.

Hence, this study was carried out to investigate the effects of some herbicides on the agro-ecosystem which include :

1. Growth characters, yield, weed density and the endogenous growth hormones of faba bean plants.

2. Soil micro-organisms population through the growing season.
3. Faba bean diseases .
4. Herbicides persistence and the residual effects on the growth, yield and endogenous growth hormones on the following summer crops i.e. maize, soybean, cucumber, and squash.
5. Economic evaluation.

REVIEW OF LITERATURE.