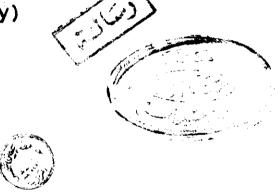
## EFFECT OF SOME PESTICIDES ON THE SEQUENCE OF CELL DIVISION IN PLANTS.

#### THESIS

Submitted in Partial Fulfilment of the Requirement
For The Award of The Degree of

M.Sc.in Botany

(Cytology)



Ву

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# TO MY DEAREST SISTER

This thesis has not been previously submitted for a degree at this or any other university.

MDHAMED SOLIMAN AHMED.

## ACKNOWLEDGEMENT

#### Acknowledgements

I would like to express my deep appreciation to Prof. Dr. A.El-Bayoumi, professor of cyto-genetics and Dr. A.A. Habib, acturer of cyto-genetics, Botany Dept., Fact.of Science, Ain-hams Univ., for suggesting the point, supervising the work help, bustructive critism and discussion throughout the work.

I am greatly indebted to Prof.Dr. H.A.Foda, Head of Botany ept., and all members of Botany Dept., Fac of Science, Ain Shams niv. for their continuous encouragement.

I am also wishes to thank all the members of Botany and chemistry Dept., Fac.of Science at Kena, Assuit Univ. for making very facility available to me and for their useful discussions.

I am also grateful to all those who contributed to the lossary in any way; particularly to Prof.Dr.M.El-Gamal, Ministry f Agriculture; Dr. H.M.Meckawy, National Center for Social and riminal researches, Mr. N.Kh.Mousa., Mr. E. Abou Rass and Mr. M. Kamel.

Mohamed Soliman Ahmed.

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## INTRODUCTION

#### I - Introduction

In recent years application of different pesticides were dely utilized. The use of such pesticides could overcome the ass of up to 50% of agricultural crop yields. However, a large nount of investigations showed the danger of these pesticides in the damage of the hereditary material. For example the effect of a number of pesticides in inducing chromosomal aberration in both mitotic and meiotic divisions (Grover and Tyagi, 1980, mer and Ali 1980, Soliman and Al Najjar 1980) and many others. he frequency of cancer was increased among people who have been apposed to pesticides (Aželson and Sundell 1974,1977; Barthel 1976; Hardell 1979; Hardell and Sandström 1979 and Infante et al., 1978).

The danger of these pesticides does not necessary be due of direct contact, since it was found that some of these pesticides may accumulate in the food to a toxic level and therefore buld be dangerous on the public health. Unterstenhöfer (1963) nowed that the insecticide "Baygen" (2-isopropexyphenyl-N-methyl arbamate) caused a considerable activity against stored products and an public health.

Jones and Gones (1974) reported that the pesticides arseicals, organochlorine or organobromine compounds may persest in
ne soils for months or years. As a result of successive treatent, a certain amount of pesticide accumulates in the soil which
by harm the root system.

At present, hunders of chemicals are being used as pesticdes. Many of them showed to have a mutagenic effect on differint organisms (Amer, (1965), Amer, and Ali, (1974 & 1980), Amer, and Farah, (1974 & 1975).

The sim of the present study is to investigate the cytological effects of three pesticides newly released on the process of mitosis on root tips of Allium depa. Also, to investigate their effect on the rate of germination of both Allium cepa seeds and Vicla faba seeds. Those pesticides are the fungicide "Bupirimate", the insecticide "Curacron" and the herbicide "Dual".

## LITERATURE\_REVIEW.

#### II - Literature Review

#### . Classification and types of Posticides:

Ina pesticides used in the present investigation include ungicides, in-secticides and herbicides. Fungicides can be dirided into four groups, according to their action; protective, predicents, protective and eradicant and chemotherapeutants fungicides (Malolm, 1956). Protective fungicides are applied as foliage and fruit aprays or dusts to keep disease causing fungi from entering fungi. group of chericals include glyodin, zineb, sulfur, thiran, polyran, ziram and possibly the inorganic copper materials. These compounds must be applied before an infection starts. Eradicant fungicides are applied as foliage sprays, seed treatment, or soil drenches to kill or inhibit fungi after they have penetrated plants. Those fungicides have limited uses and often dangerous to use on green foliage and fruits. Protective and credicant fungicides are used to control foliage and fruit diseases and may also perform well as secd treatments. These materials in addition to offering projector, they are sufficiently toxic to fungus spores and mycelium to credicate burn-out established infections. Captan, folpet and dodine possess both fungicidal qualities. Other fungicides that have good protective characteristics and that may also partly eradirate established infactions are maneb, misside M, and nabam. Also, the fungicide "bupirimete" which is one of the investigated

substances in the present work, has both eradicant and protective