INTRODUCTION

I- INTRODUCTION

Among blood-sucking insects that annoy man and other warm blooded animals, mosquitoes generally stand first and foremost . Their nuisance certainly pals into significance if we consider their potentialities as insect vectors of many diseases . ***Culex pipiens*** is one of the most widespread culicide mosquitoes and researches for its control has recently been increased because of the world-wide importance of ***wuchereria bancrofti*** and Rift valley fever virus (**Hoogstraal *et al.*, 1979, Meegan *et al.*, 1980**) .

Numerous research studies have been conducted to find non chemical methods of control . Such studies are still in progress, but chemical insecticides remain as one of the most important potential tools for mosquito control for many years to come .

As a result of the extensive use all over the world of chemical insecticides for the control of economic insect pests, many species of these insects developed high levels of resistance to insecticides . According to **WHO** this phenomenon constitutes a serious threat to the successful control of such pests . Resistance has been reported not only to the new synthetic insecticides but also to insect growth regulators, chemosterilants and even to the biological control agents **(Sawicki, 1979)** . Serious attention has been paid to study this phenomenon from various points of view hoping to overcome it **(Mouchet, 1964; Georghiou *et al.*, 1966; Amin and Peiris, 1990)** .

The present study aimed to investigate the resistance of *Culex pipiens* larvae to commonly used insecticides, so that, the knowledge of the rate of development and reversion of insecticide resistance, cross-resistance, joint action and also the synergistic actions of some synergists would be of a valuable information in the research of control .

AIM OF THE PRESENT STUDY

1- Evaluation of the susceptibility of two geographic strains of ***Culex pipiens*** larvae to different insecticides and IGRs .

2- Induction of resistance in a strain of ***Culex pipiens*** larvae to study the development and reversion of insecticide resistance, cross-resistance spectra, joint action of available insecticidal agents and the possible use of insecticide synergists .