USING OF NON-CHEMICAL METHODS FOR CONTROLLING MOLE-CRICKET TO AVOID ENVIRONMENT POLLUTION IN PROTECTIVE CULTIVATIONS

BY

NAGWA MOHAMED MOHAMED ABO-EL-HAMAYEL
B. Sc. (Agricultural Sc.), Ain Shams, 1981

THESIS

Submitted in fulfilment for the Requirments of the Degree of

MASTER

in

Environmental Agricultural Science

Supervised by

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APPROVAL SHEET

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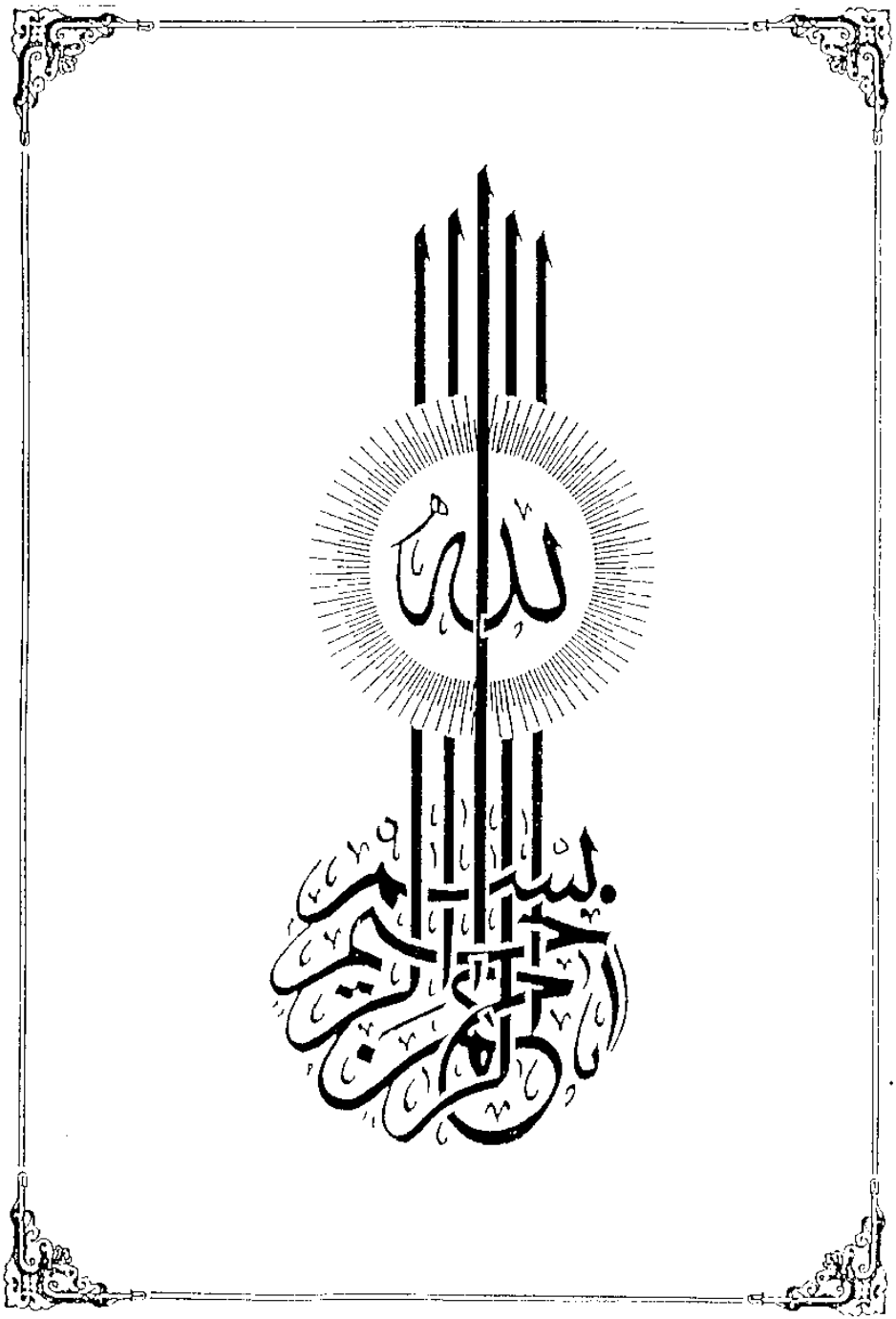

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INTRODUCTION

Mole-crickets are economically important species in Egypt. The insect causes considerable damage to vegetable crops especially, the tuberous ones such as potatoes. It cuts the roots and stems of small plants under the soil surface.

The successful control of any pest needs a thorough knowledge of its ecological aspects. During the last few decades, use of chemical insecticides has become the predominant method of control of all pests in Egypt.

During the 1970's there has been a rising concern over the accumulation of chemical insecticides in the environment with resulting adverse effects on beneficial insects, wild life populations and human health. Other disadvantage of dependence on insecticides that major groups of pests have developed strains that are genetically resistant to these chemicals.

Specially, it is important to eliminate the amounts of pesticides used on the protective cultivation as they include vegetables and ornamental crops.

Because of the growing obnoxious damage caused by mole-crickets every year and the inadequacy of certain

ecological information available. The present work has been planned to:

1. Clarify the population dynamics and some other ecological aspects of this pest.
2. Using a pitfall traps as a method of mole-crickets control in protective cultivations.
3. Recent encouraging IPM research and demonstration programmes include insect growth regulators. Thus the present work was planned to study the effect of juvenile hormone mimic, pyriproxyfen on the mole-cricket. Gryllotalpa gryllotalpa cophta. This compound may be considered to be safe to environment. wild life populations and human health.