FIELD EVALUATION OF SOME NEW METHODS FOR CONTROLLING SOME TOMATO INSECT PESTS TO MINIMIZE THE INSECTICIDAL POLLUTION

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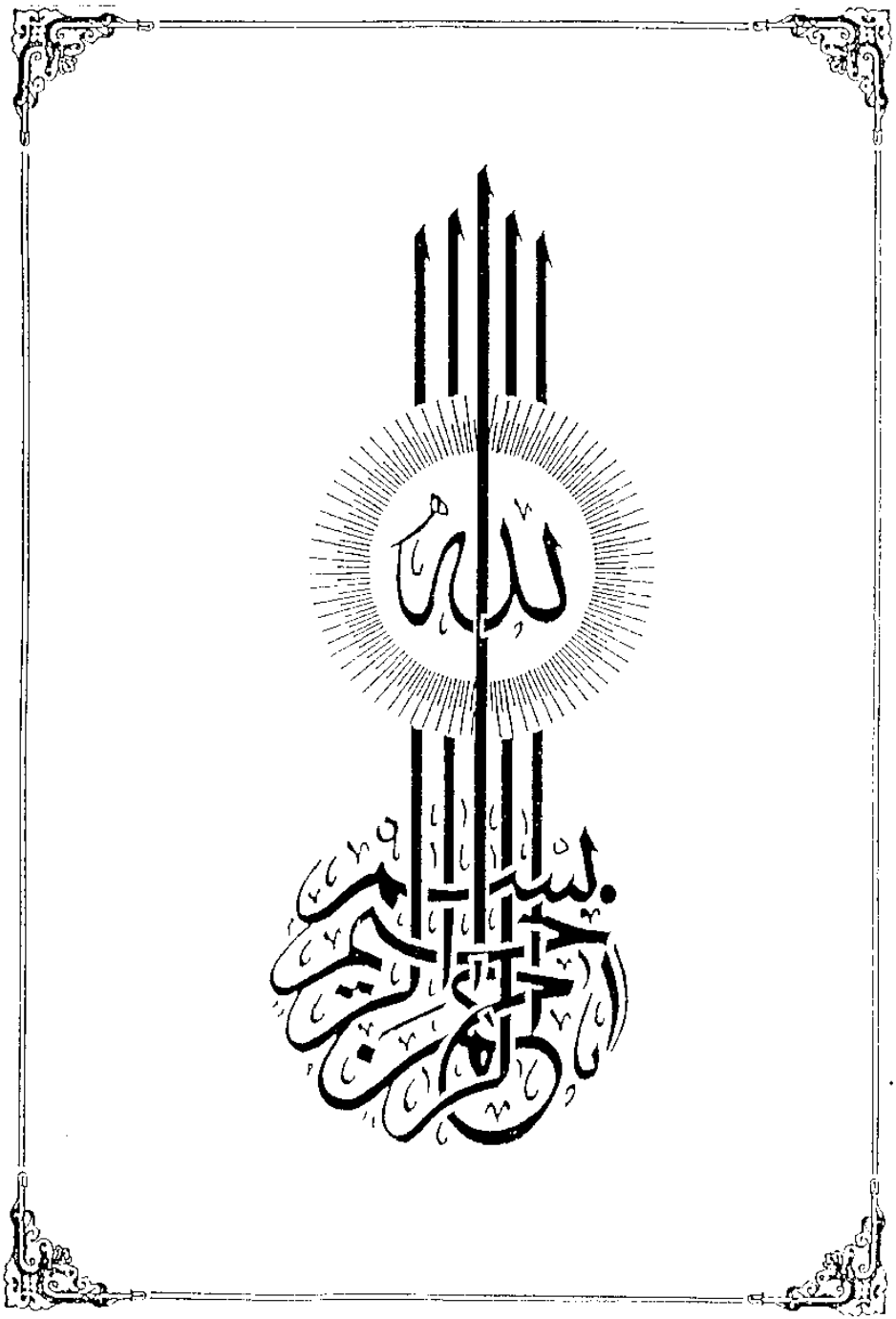

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ABSTRACT

Mahmoud Hussein Mahmoud Kamel : Field evaluation of some new methods for controlling some tomato insect pests to minimize the insecticidal pollution. Unpublished Ph.D. Thesis in Environmental Sciences, Institute of Environmental Studies and Researches, 1997.

Two sap sucking insects found attacking tomato plants causing serious damage to this important plant. The aim of the present study is to reach a high degree of controlling these serious pests with the least amount of hazards to the environment. The following results were obtained :

The two insects population were highest during nili plantation of tomato followed by summer then winter plantations. Six controlling measures were evaluated under field conditions, *i.e.* yellow sticky traps, covering with Agryl P17, calcium chloride ($CaCl_2$), plant extract, mineral oil, and insecticides. In respect to the effect of these treatments on the two insects population, it was found that coverage then insecticides, mineral oil were the most efficient tools, followed by plant extract. Traps and fertilizer treatments came in the last grade. Concerning the effect of these measures on TYLCV spread, coverage then mineral oil came to the first grade. Insecticides, then plant extract ranked the second, while traps and fertilizer treatments had the least effect. In respect to horticultural measurements, coverage and insecticides treatments ranked first and mineral oil, plant extract came to the second grade, while both of traps and fertilizer treatments came in the third grade.

KEY WORDS : Egypt, Tomato, Whitefly, *Bemisia tabaci*, Aphid, *Myzus persicae*, Agryl P17, Mineral oil, Plant extract, calcium chloride, Insecticides, Yellow sticky traps, TYLCV, Vegetative measurements, Fruit measurements.

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CONTENTS

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CONTENT : Cont'd.