THE DEVELOPMENT OF BOLLWORM INFESTATION IN THE COTTON CROP AND ITS RELATIONSHIP TO DAMAGE AND YIELD

BY

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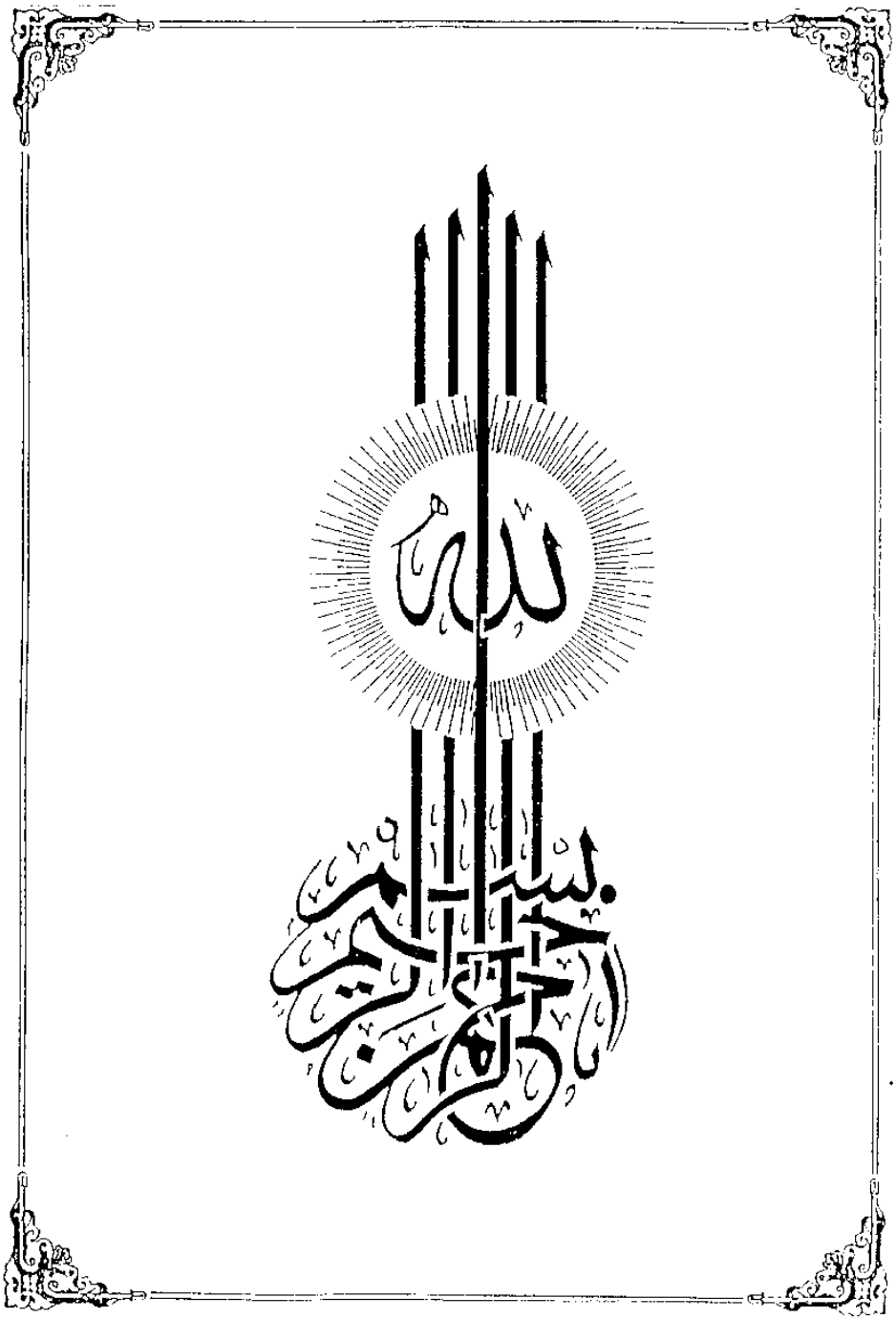

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Abstract

The present work was carried out aiming mainly for contributing more knowledge to the available ecological aspects , based on results obtained from field trials carried out during 1986 up to 1988 seasons in Fayoum, Bahteem and Shalacan. Additional data of past 13 years for Bahteem, Kaluobia was considered to predict the size of pink bollworm infestation in green bolls depending on the population trends of moths . The preceding and simultaneous effect of certain weather factors on the population dynamics and size of the pink bollworm moths were studied. The results revealed that the presence of strong combined effect of five weather factors covering the changes in the population size of pink bollworm moths. The number and duration of the annual field broods and generations of the pink bollworm Pectinophora gossypiella(Saunders) moths as indicated by sex pheromone trap catches in cotton fields also were studied. The results showed that the Pectinophora gossypiella moths started to appear in the traps during March and continued up to June ,

forming the first or suicidal brood which is characterized by two or three successive peaks. The second brood was commonly occurred between late of June and early of December, and characterized by four distinct over lapping generations (field generations). When the dispersion of the pink bollworm infestations and its effect on the sampling programmes were studied, the analysis of the data denote that the accurate time and place for detecting the true population trends of the pink bollworm in cotton fields may be sampling the green bolls from the lower plant level during July, from the whole plant during August and from the upper and middle plant level during September.

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