EFFECT OF SOME SUB-OPTIMAL ENVIRONMENTAL CONDITIONS ON THE GROWTH OF TOMATO IN ARID LANDS

By

Abdel-Mawgoud Ragab Abdel-Mawgoud
B.Sc. (Agric.) In Horticulture, 1990
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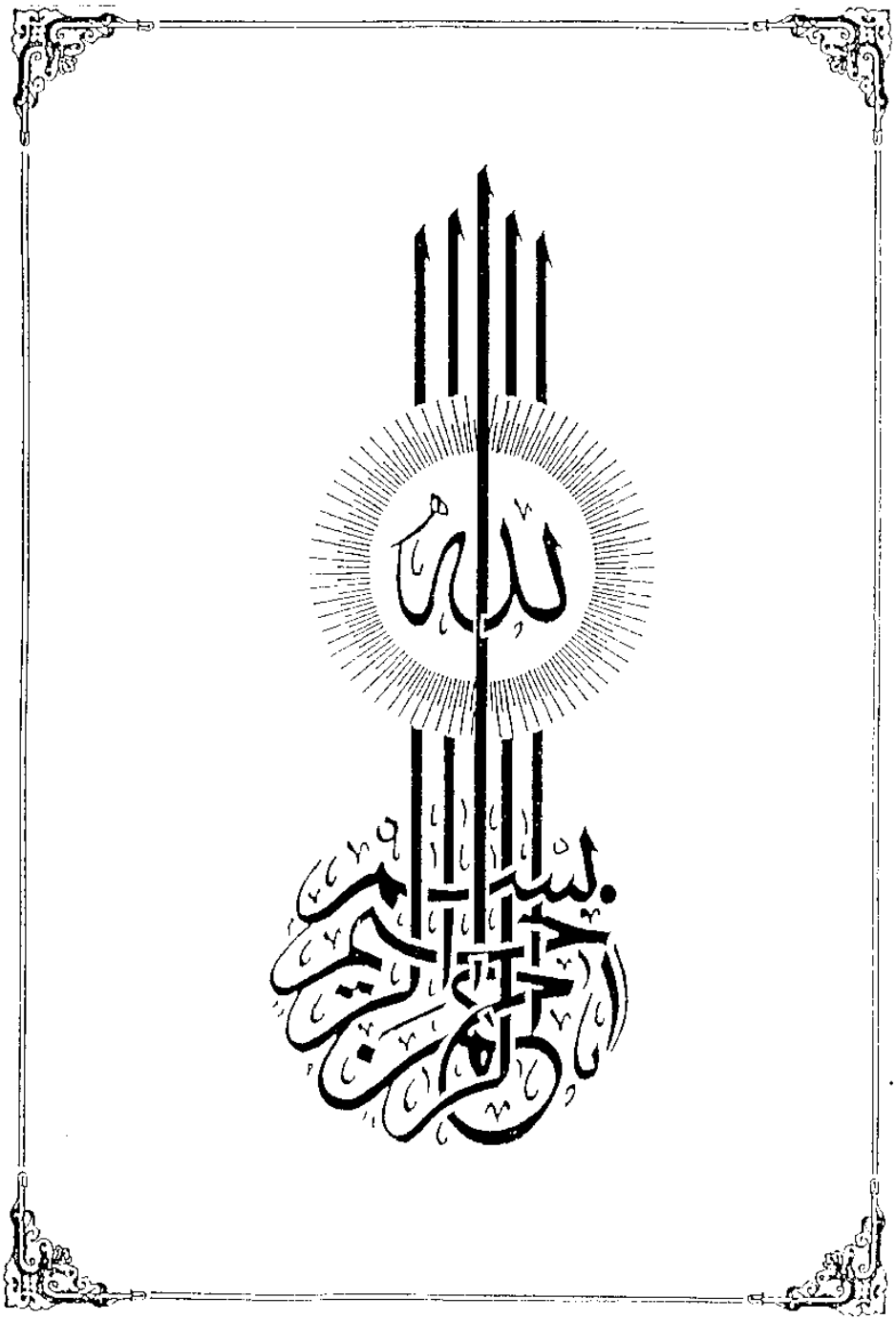

Approval Sheet

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BY

ABDEL-MAWGOUD RAGAB ABDEL-MAWGOUD

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Ain Shams University

This thesis for M.Sc. degree has been approved by:

1- Prof. Dr. Hosnia Mohamed Gomma
Prof. Of vegetables, Fac. Agric.,
Ain Shams University.

2- Prof. Dr. Maher Amin Waly
Prof. Of vegetables, Fac. Agric.,
El-Azher University.

3- Prof. Dr. Ayman F. Abou-Hadid
Prof. Of vegetables, Fac. Agric.,
Ain Shams University.

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BY

ABDEL-MAWGOUD RAGAB ABDEL-MAWGOUD
B.SC.(AGRIC.) IN HORTICULTURE, 1990

Under the supervision of:

Prof. Dr. Adel S. El-Beltagy
Prof.Of Vegetables, Fac. Agric., Ain Shams University.

Prof. Dr. Ayman F. Abou-Hadid
Prof.Of Vegetables, Fac. Agric., Ain Shams University.

Prof. Dr. Samir O. El-Abd
Prof.Of Vegetables, Dept. Hort. Res., Nati. Res. Cent.

Abstract

Abdel-Mawgoud Ragab Abdel-Mawgoud. Effect of Some Sub-optimal Environmental Conditions on Growth of Tomato in Arid Lands. Published for Master of science - Ain Shams University.

Evaluation of some shading materials (Agryl 17, cheese cloth and polyethylene nets), effect of 30 % shade, and estimation of evapotranspiration and crop coefficient of tomato plants were the objectives of this study. Castle rock, Prigrade and Cample 136 varieties were used.

Results showed that Agryl 17 as a direct cover was not favorable compared with the other two shading materials in terms of reducing temperature. In general shade didn't affect total fresh yield of tomato plants. These results were confirmed by the results obtained in the second experiment.

Evapotranspiration of tomato plants were determined using Bowen Ratio-Energy Balance technique (BREB). A computer model developed by **Hsiao (1990)** using daily potential evapotranspiration, maximum ground cover percentage, method and time of irrigation, and growth rate of the crop compared with standard bean crop was used to calculate theoretical evapotranspiration. A highly agreement between the two methods were noticed and crop coefficient was calculated using the two methods.

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