EFFECT OF FERTILIZATION WITH DIFFERENT FORMS OF NITROGEN FERTILIZERS ON GROWTH, FLOWERING, MINERAL CONTENT AND YIELD OF BANANA

BY

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B. Sc., Agric. (Horticulture), Ain Shams Univ., 1979
M. Sc., Agric. (Fruit Crops), Ain Shams Univ., 1988

A thesis submitted in partial fulfillment

Of

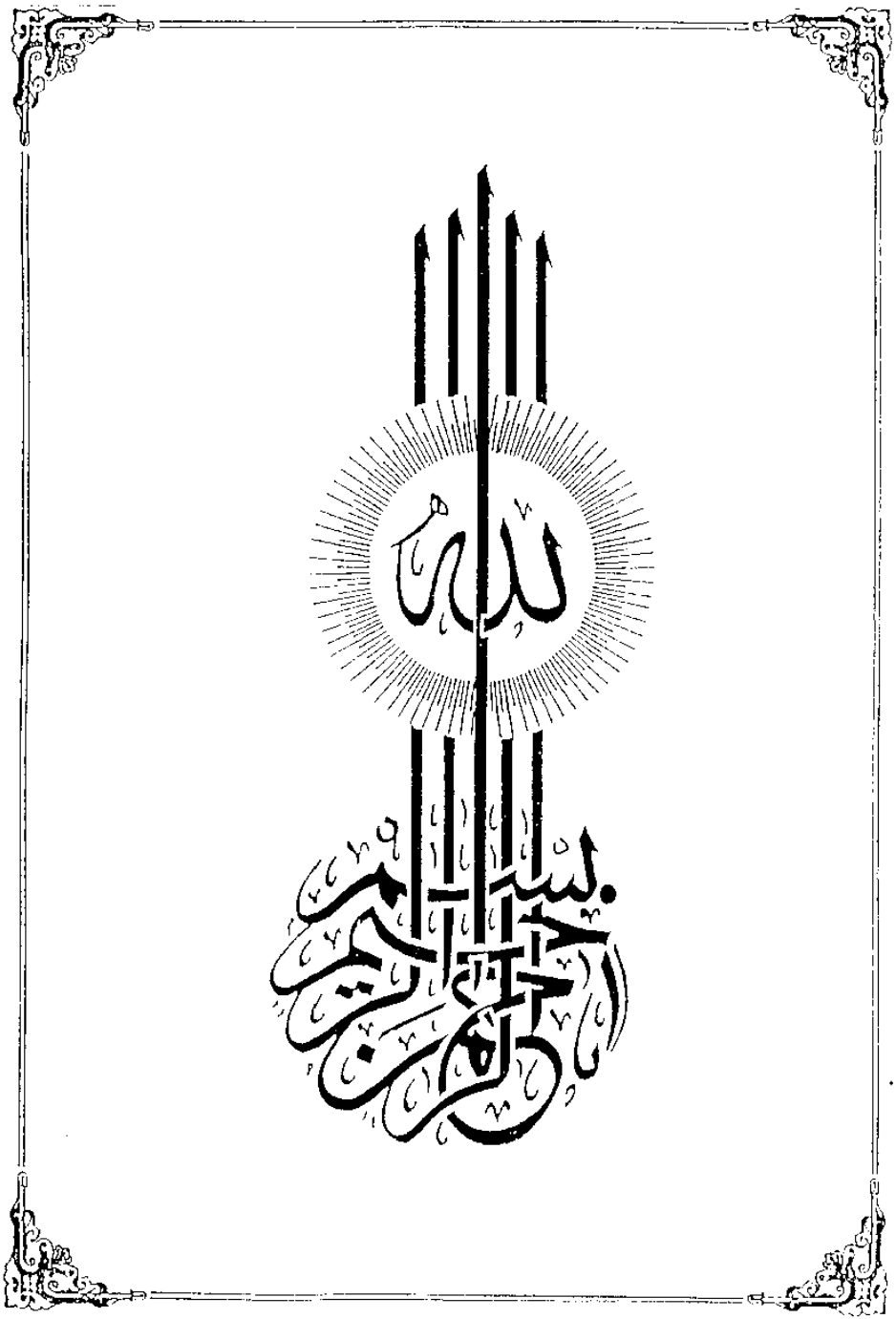
the requirements for the degree of
DOCTOR OF PHILOSOPHY

In

Agricultural Science
(Pomology)

Department of Horticulture
Faculty of Agriculture
Ain Shams University

1996



APPROVAL SHEET

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ABSTRACT

Mohamed Maher Saad Saleh . On the effect of fertilization with different forms of nitrogen fertilizers on growth, flowering, mineral content and yield of banana . Unpublished Doctor of philosophy dissertation, University of Ain Shams, Faculty of Agriculture, Department of Horticulture, (Pomology), 1996 .

Three experiments were carried out on Williams banana during 1991 - 1994 as follows : -
(1) Effect of different forms of nitrogen fertilizers on growth, flowering, mineral content , yield and fruit characteristics of Williams banana) . In this experiment each of calcium nitrate , ammonium sulphate, ammonium nitrate or urea were added at 500 gm N / plant and were split into 14 equal applications, whereas ureaformaldehyde (UF) at 500 or 250 gm N / plant were added one time in April. All fertilizers (treatments) gave more or less similar results . Moreover, UF at 250 gm N / plant gave the lowest amount of total N and NH_4^+ and low amount of NO_3^- in the soil at the end of the experiment . So, using UF as nitrogen fertilizer reduced the amount and number of nitrogen applications and gave similar yield as those of other treaments.
(2) (Effect of level, number and dates of applications of ureaformaldehyde) . This experiment included three levels of UF (500 , 350 and 200 gm N / plant) added one time in April or split into two applications in April and July or in April and October . UF at 200 gm N / plant

added one time in April gave better vegetative growth and the highest yield .

3- (Effect of different levels of ureaformaldehyde)

This experiment included three levels of UF (250 , 200 and 150 gm N / plant) each was added one time in April . UF at 200 or 150 gm N / plant gave similar results and increased the yield significantly than the high level . Low level reduced the content of total N , NH_4^+ and NO_3^- in the soil . So, fertilizing with UF at 150 gm N / plant seems to be the promising treatment for Williams banana.

Key words : - Nitrogen fertilizers , ureaformaldehyde , calcium nitrate , ammonium sulphate , ammonium nitrate , urea , Williams banana , mineral content , yield, fruit characteristics , slow release fertilizers .

ACKNOWLEDGMENT

I am deeply indebted to ***Dr. Ibrahim Shawky EL-Sayed***, Professor of Pomology, Faculty of Agriculture, Ain-Shams University for suggesting the current study, his supervision, continuous guidance, kind support and revision of the manuscript.

I would like to express my deep thanks to ***Dr. Mohamed ABou-Rawash Ali***, Professor of Pomology, Faculty of Agriculture, Ain-Shams University for his supervision, continuous encouragement, sincere help and revision of the manuscript .

Also my deep gratitudes are offered ***to Dr. Essam Abd El-Aziz Shabaan***, Professor of Pomology, National Research Center for his supervision, kind support and fruitful encouragement .

I am also thankful to ***Dr. Lila Fouad Hagag*** Assistant Professor of Pomology, National Research Center for her sincere help.

I am thankful to Academy of Scientific Research and Technology for helping and monetary support for this investigation .

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