COMPARATIVE STUDY OF SOME DECISION MAKING PROCEDURES USED IN FIELD CROP EXPERIMENTS

BY

SAMIA GODA ATIA MOHAMED

B.SC. Agric, (Cairo) , Univ.,1982

M.SC.Agric, (Agronomy) Ain Shams Univ., 1993

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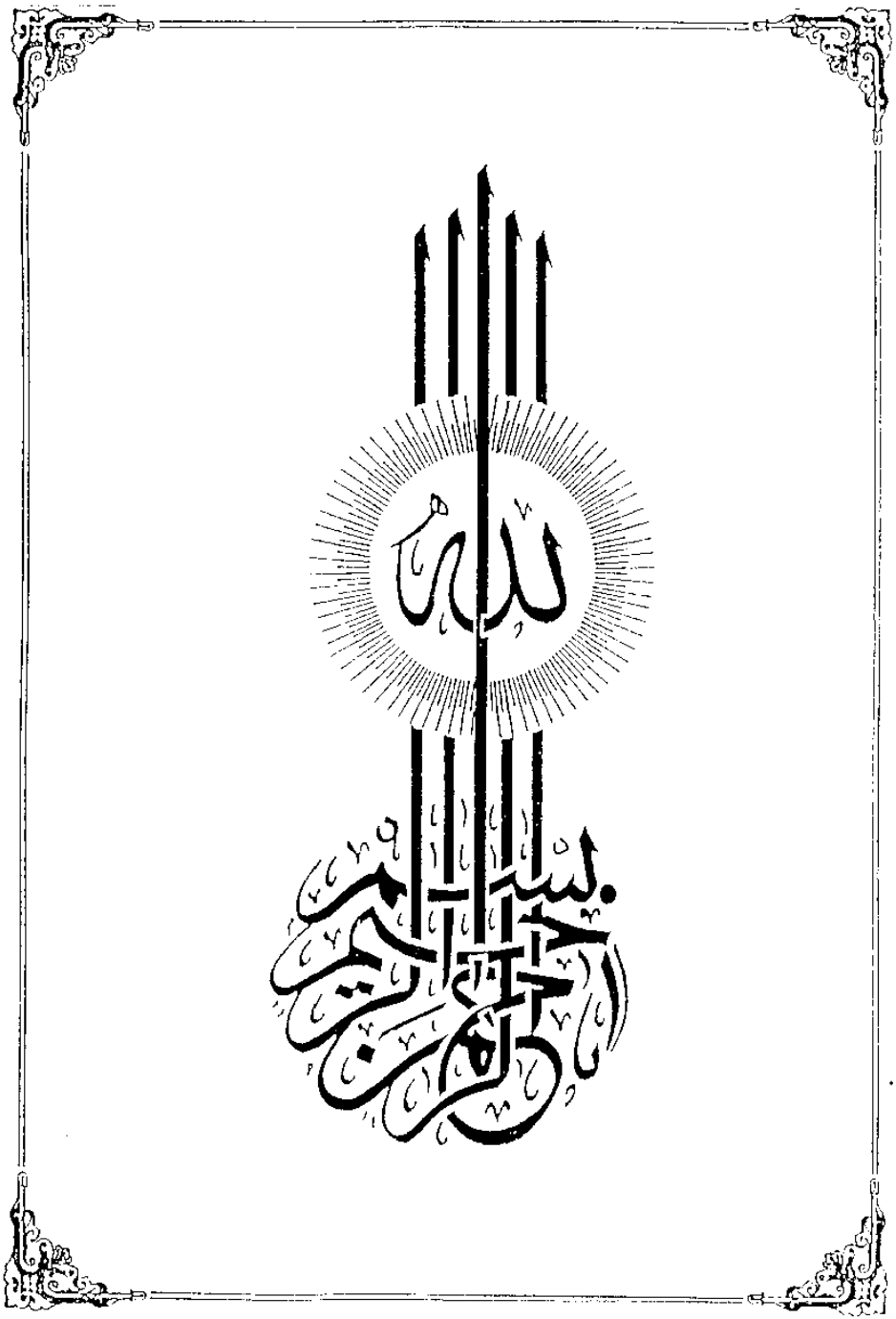

APPROVAL SHEET

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SAMIA GODA ATIA MOHAMAD.
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M.SC.Agric (Agronomy) Ain Shams Univ., 1993

This thesis for ph.D degree has been approved by:

Prof. Dr. Lotfy Hindy Aliy Hindy ...L...Hindy

Prof. of Agronomy, Cairo,. Univ.

Prof Dr. Abdel Azim Abd Elgawad ...A...Gawad

Prof of Agronomy, Ain Shams Univ.

Prof. Dr. Nemat A. Nour El-Din N...Nour El

Prof. of Agronomy , Ain Shams Univ.

Date of Examination : 29/12/1997

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BY

SAMIA GODA ATIA MOHAMED
B.SC. Agric (Cairo) Univ., 1982
M.SC. Agric (Agronomy) Ain shams Univ., 1993

Under the supervision of:

Prof. Dr. Nemat A.Nour El-Din
Agron Dep., Fac. of Agric. Ain Shams Univ.

Prof. Dr. A.A.Abdel- Halim
Director of Central Laboratory for Design and statistical Analysis Research.

Dr. A. El. B ially
Assist. Prof. Agric Ain Shams Univ.,

ABSTRACT

Samia Goda Atia Mohamed. Comparative study of some decision making procedures used in field crop experiments. Unpublished Doctor of philosophy Dissertation, University of Ain shams, Faculty of Agriculture, Department of Agronomy, 1997.

This research explains the concept and importance of factors affecting experimental decision. It enables the researcher to have a quick knowledge about the nature of data. It facilitates drawing and interpreting results. Choosing the ideal procedure should be built on three basic steps:

(1) Detection recognizing the concept.
(2) Diagnose the symptoms (effect)and
(3) Determine the remedy (correction).

There are two consideration that should be taken into account during the decision making process namely , consideration concerning experimental design and consideration concerning statistical analysis Regarding experimental design, the higher number of replication the lower the experimental error and vise versa.

Selecting efficient designs also raise the efficiency. Further more, estimation of relative efficiency can be helpful to evaluate experimental design. Regarding statistical analysis, the first basic step is the analysis of variance. If the coefficient of variation , CV% was found to be relatively high, it means that the experimental design is not efficient. To solve these problems, selecting efficient

experimental plan, transformation of data another scale, omitting some treatments or observations.

Selecting valid error can be used to raise efficiency. It enables the researcher to make the correct statistical decision and recommendation. The material used in this study were experimental data, simple, factorial, horticulture, and weed control.

Key words:

Experimental design, error, ANOVA, ANOCOVA, efficiency, expectation mean Square, normality, additivity, effect detection, correction, non parametric, experimental decision.

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CONTENTS

LIST OF TABLES