

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

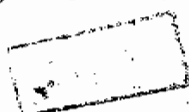
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A thesis submitted of in partial fulfillment  
of

the requirements for the degree of

**DOCTOR OF PHILOSOPHY**

**IN**

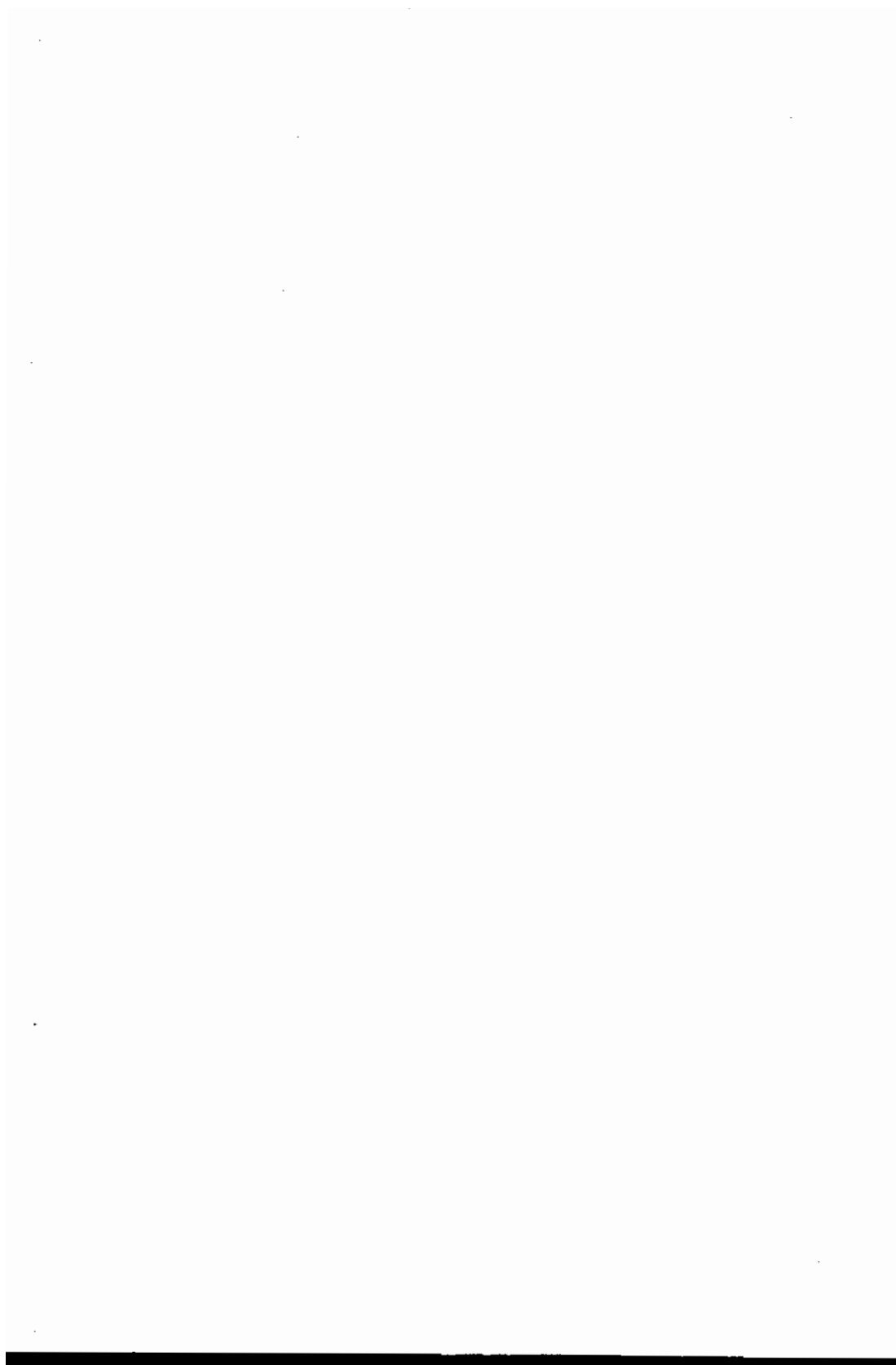
**Agricultural Science**

**(AGRONOMY)**

63887

**Agronomy Department  
Faculty of Agriculture  
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**(1998)**





## **APPROVAL SHEET**

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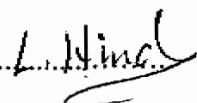
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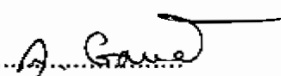
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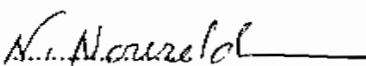
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## ABSTRACT

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 Unpublished Doctor of philosophy Dissertation, University of Ain shams, Faculty of Agriculture, Department of Agronomy, 1997.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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## ACKNOWLEDGMENT

The writer wishes to express his sincere appreciation and gratitude to **Dr. Nemat Nour El Din, professor of Agronomy, Faculty of Agriculture, Ain shams University** for suggesting the problem, supervision and constructive criticism during the progress of study and the preparation of manuscript.

Thanks and gratitude are also due to **Dr. A.A.Abed Halim, professor of applied statistics of the central statistical laboratories, Agricultural research center,** for suggesting the problem, supervision & valuable, constructive criticism and revising the manuscript.

Thanks and gratitude are also extended to **Dr. M. El-Re. . El-Bially** Associate prof. of Agronomy, Faculty of Agriculture, Ain shams University for supervision and help offered during this study.

I am also indebted and offer my thanks to all members of central laboratory for design and statistical analysis research for financial support and facilities offered.

Special thank are also extended to my parents and all my family for continuous encouragement and their kind collaboration.

The first part of the paper discusses the importance of the research and the objectives of the study. It then proceeds to a literature review, followed by a description of the methodology used. The results of the study are presented in the next section, followed by a discussion of the findings and their implications. The paper concludes with a summary of the main points and a list of references.

The research was conducted in a systematic and rigorous manner, following the principles of good research practice. The data collected was analyzed using appropriate statistical methods, and the results were presented in a clear and concise manner. The findings of the study are discussed in detail, and their implications for practice and policy are explored. The paper is well-structured and easy to read, and it provides a valuable contribution to the field of research.

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