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DEVELOPMENT AND EVALUATION OF AC-DC
INCUBATOR

THESIS

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DON SEVERINO AGRICULTURAL COLLEGE

Indang, Cavite

April 1997

DEVELOPMENT AND EVALUATION OF AN AC-DC INCUBATOR

**An Undergraduate Thesis
Presented to the Faculty of the
School of Engineering
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**In partial fulfillment
of the requirements for the degree of
Bachelor of Science in Agricultural Engineering
(Major in Farm Power and Machinery)**



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ABSTRACT

VILLANUEVA, SMILYN Y RODIL: Don Severino Agricultural College, Indang, Cavite. April 1997. DEVELOPMENT AND EVALUATION OF AN AC-DC INCUBATOR.

Adviser: Engr. Cesar C. Carriaga

An AC-DC incubator which has a capacity of 500 eggs, 300 watts heating element, 50 watts fan and ventilation hole on top was developed and evaluated at the School of Engineering, Don Severino Agricultural College, Indang, Cavite.

The machine has an initial cost of P12,213.50, total operation cost of P35,021.60 per year and operating cost per batch of P2,918.47.

The incubator maintained an average temperature of 39.81°C that resulted to 78.77% hatching efficiency. The result of the study shows that the hatching efficiency of the AC-DC incubator is 3.01 percent higher than that of the solar powered incubator.

TABLE OF CONTENTS

	PAGE
BIOGRAPHICAL SKETCH	iii
ACKNOWLEDGMENT	iv
ABSTRACT	vii
LIST OF TABLES	x
LIST OF FIGURES	xi
LIST OF APPENDIX TABLES	xii
LIST OF APPENDIX FIGURES	xiii
INTRODUCTION	1
Importance of the Study	2
Objectives of the Study	2
Time and Place of the Study	2
Scope and Limitation of the Study	3
REVIEW OF LITERATURE	4
Time of Hatching	4
Types of Incubator	5
Selecting Eggs for Hatching	6
Requirements for Incubation	6
Position of the Egg Turning	10
Turning the Eggs	11
Cooling the Eggs	12
MATERIALS AND METHODS	15
Materials	15
Description of the Machine	15

	PAGE
Principles of Operation	18
Data Gathered	22
Statistical Analysis	23
RESULTS AND DISCUSSION	24
Hatching Efficiency	24
Operating Temperature	25
Comparison of Temperature of the AC - DC and Solar Powered Incubator	27
Room Temperature	28
Power Consumption	30
Cost Analysis	30
SUMMARY, CONCLUSION AND RECOMMENDATION	35
Summary	35
Conclusion	35
Recommendation	36
BIBLIOGRAPHY	37
APPENDICES	38

LIST OF TABLES

TABLE		PAGE
1	Status of Egg Fertility	25
2	Operating Temperature	26
3	Comparison of Operating Temperature of the AC - DC and Solar Powered Incubator	28
4	Room Temperature	29
5	Notes and Assumption in the Cost Analysis	32
6	Cost Analysis of the Incubator	33
7	Bill of Materials	34

LIST OF FIGURES

FIGURE		PAGE
1	Framing Plant (Open)	15
2	Perspective View of the Incubator	16
3	Top Wall of the Incubator	17
4	Hatching Tray	19
5	Incubation Tray Pack	20
6	Wiring Diagram of the AC - DC Incubator	21

LIST OF APPENDIX TABLES

APPENDIX TABLE	PAGE
1 Relative humidity inside the incubator	39
2 Relative humidity of the room	40

LIST OF APPENDIX FIGURES

APPENDIX FIGURE	PAGE
1 Photographic view of the AC-DC incubator	41

DEVELOPMENT AND EVALUATION OF AN AC-DC INCUBATOR^{1/}

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INTRODUCTION

The invention of efficient incubators and systems of brooding and the discovery of improved breeding management and feeding methods gave strong impetus to specialized poultry raising. This is because poultry raising which began its development in the 20th century has been a part of farm management for centuries although as a separate large scale commercial enterprise.

The poultry industry in the Philippines has grown up so rapidly that it has significantly attracted not only big investors but even farmers in subsistence level of livelihood. Some successful commercial hatcheries obviously produce good and excellent quality birds and they have found out that artificial hatching is more economical than the natural process.

Artificial incubation of eggs is a delicate part of the poultry business. Proper provisions like temperature,