636.513 R64 2000

513

VERIFICATION THE TRADITIONAL BROODING SYSTEMS AND CHICK GROWTH

THESIS

SERAFIM C. ROLLE

Department of Animal and Veterinary Sciences

CAVITE STATE UNIVERSITY

Indang, Cavite

April 2000

VERIFICATION TRIAL ON THE TRADITIONAL BROODING SYSTEMS AND CHICK GROWTH

Undergraduate Thesis
Submitted to the Faculty of the
Cavite State University
Indang, Cavite

In partial fulfillment
of the requirements for the degree of
Bachelor of Science in Agriculture
(Major in Animal Science)



Verification trial on the traditional brooding systems and chick growth 636.513 R64 2000 T-2106

SERAFIM C. ROLLE April 2000

ABSTRACT

ROLLE, SERAFIM C., Cavite State University, Indang, Cavite, May 2000. "Verification Trial on the Traditional Brooding Systems and Chick Growth." Adviser: Dr. Magdalena N. Alcantara.

One hundred eighty (180) straight-run day-old chicks were used in this study to verify which of the three traditional brooding systems (used of charcoal heaters, incandescent bulbs and open-flame kerosene lamps) was the most effective, practical and economical.

Chicks brooded using incandescent bulb gained the highest body weight.

There were no differences in feed consumption after brooding using kerosene lamp.

Average brooding temperature was highest in the charcoal brooder while incandescent bulb brooder was the coldest.

TABLE OF CONTENTS

	Page
BIOGRAPHICAL DATA	iii
ACKNOWLEDGMENT	iv
ABSTRACT	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
LIST OF APPENDIX TABLES	xi
INTRODUCTION	1
Importance of the Study	2
Objectives of the Study	2
Time and Place of the Study	2
REVIEW OF RELATED LITERATURE	3
Importance of Brooding Temperature	3
Types of Brooder	4
MATERIALS AND METHODS	6
Heaters	6
Stock and Experiment Design	. 7
Feeding Management	7
Health and Sanitation	7
Data Collection and Analysis	8

RESULTS AND DISCUSSION	9
Body Weights	9
Initial weight	9
First week weight	9
Second week weight	10
Gain in body weight	10
Feed Consumption and Efficiency of Food Utilization	11
Livability of Bird Appearance	12
Brooding Temperature	12
Actual Brooding Expenses Per Lot	13
SUMMARY CONCLUSION AND RECOMMENDATION	15
Summary	15
Conclusion	16
Recommendations	16
LITERATURE CITED	17
FIGURES	18
APPENDICES	22

LIST OF TABLES

Table		Page
1	Mean body weight and gain in body weight (g) of broiler chicks subjected to three traditional brooding systems.	9
2	Average cumulative feed consumption and feed conversion efficiency (g) of chicks subjected to three brooding systems.	11
3	Average daily temperature (°C) of the three traditional brooding systems	13
4	Actual brooding expense (P) per lot	14

LIST OF FIGURES

Figure		Page
1	Chicks brooded using a charcoal heater (Lot 1)	19
2	Chicks brooded using incandescent bulb (Lot II)	20
3	Chicks brooded using kerosene lamp (Lot III)	21

LIST OF APPENDIX TABLES

Appendix		Page
1	Analysis of Variance for Average Initial Body Weight	23
2	Analysis of Variance for Average Body Weight At One Week of Age	23
3	Analysis of Variance for Average Body Weight at Two Weeks of Age	24
4	Analysis of Variance for Average Gain in Body Weight	24
5	Analysis of Variance for Average Feed Conversion Efficiency at Two Weeks of Age	25

VERIFICATION TRIAL ON THE TRADITIONAL BROODING SYSTEMS AND CHICK GROWTH

SERAFIM C. ROLLE

Animal and Veterinary Sciences, College of Agriculture, Forestry, Environment and Natural Resources, Cavite State University, Indang, Cavite in partial fulfillment of the requirement for the degree of Bachelor of Science in Agriculture (BSA), Major in Animal Science, Contribution No. BSA-2000-01-026. Prepared in the Department of Animal and Veterinary Sciences under the supervision of Dr. Magdalena N. Alcantara.

INTRODUCTION

The process of providing comfort and other essential requirements to chicks known as brooding is the most critical stage in the life of a bird. It is the earliest stage in the process of rearing young chick. This is necessary because the chick should be provided with the most comfortable and disease-free environment to allow the bird to attain its full growth potential. The chick must be provided with optimum heat to attain this. It is necessary since its temperature-regulating mechanism becomes fully functional only when it has grown to a point that its feathers are fully developed.

Brooding requires a well-organized plan and the necessary preparation of all the brooding facilities prior to the arrival of the chicks. Flock uniformity and weight gain measure brooding success. Complementarily there should be low