

شبكة المعلومات الجامعية







شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



شبكة المعلومات الجامعية

# جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

# قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها على هذه الأفلام قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار في درجة حرارة من ١٥-٥٠ مئوية ورطوبة نسبية من ٢٠-٠٠% To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%



# بعض الوثائـــق الإصليــة تالفــة



# بالرسالة صفحات لم ترد بالإصل

# SOME PHYSIOLOGICAL ASPECTS OF FEMALE RABBITS FED POULTRY WASTES

BY

2 MILOP

# ABD EL-HADY FAROUK HUSSEIN BADR

A thesis submitted in partial fulfillment of the requirement for the degree of

### Master of Science

in

Agriculture
(Animal Physiology)

Department of Animal Production

Faculty of Agriculture

Ain Shams University

### APPROVAL SHEET

# SOME PHYSIOLOGICAL ASPECTS OF FEMALE RABBITS FED POULTRY WASTES

BY

### ABD EL-HADY FAROUK HUSSEIN BADR

B.Sc. Agric. Science (Animal Production)
Ain Shams Univ. 1989

This	thes:	is for M.Sc. Degree has been Approved by :
	Prof	. Dr. Hussein Talaat Mohamed Abd El Bary
		H.T. Abd. E. R. Berey
		Prof. of Animal Physiology, Animal Production
		Department, Faculty of Agriculture, Al-Azhar
		University.
	Dr.	Hanafy Embaby E1-Sobhy  HE-EL-Sobhy
		Associate. Prof. of Animal Physiology, Animal
		Production Department, Faculty of Agriculture, Ain
		Shams University.
	Prof	Dr. Mohamed Ahmed El-Fouly (Advisor)
		Prof. of Animal Physiology, Animal Production
		Department, Faculty of Agriculture, Ain Shams
		University.

Date of examination: / /1995.

# "SOME PHYSIOLOGICAL ASPECTS OF FEMALE RABBITS FED POULTRY WASTES."

## BY

# ABD EL-HADY FAROUK HUSSEIN BADR

B.Sc. Agric. Scince (Animal Production)

Ain Shams Univ. 1989

Under the supervision of:

Prof. Dr. M. A. El-Fouly

Prof. of Animal Physiology Ain Shams university.

Prof. Dr. S. O. Amin

Prof. of Animal Physiology Ain Shams university.

### **ABSTRACT**

This study was conducted in the animal house and aboratory of the Department of Animal Production, Faculty of Agriculture, Ain Shams University. The trial aimed to study the effect of 15 and 30 % broiler litter replacement in the concentrated rabbit ration on some reproductive and productive parameters.

This trial included 24 New Zealand White does and 6 bucks of six months old. Does were assigned at random into three experimental groups, 8 does and 2 bucks in each.

The first group was maintained on control ration (Lactating rabbit concentrate ration) and saved as control group. The second

and the third groups were maintained on 15 % and 30 % broiler litter containing ration, respectively. All bucks were maintained on the control ration. Youngsters were weaned at 28 days of age and fed on their dam's ration for 5 weeks (till 63 days of age).

Number of services per conception, conception rate, gestation period length, conceptus weight, litter size at birth and weaning, and mortality rate pre- and post-weaning were not significantly influenced by dietary treatments. While litter weight at birth and at weaning, and daily gain from birth till 9 weeks of age were significantly influenced by dietary treatments, being lower in the broiler litter fed groups and this was more pronounced in the 30 % broiler litter fed group. Parity had a significant effect only on conception rate and litter size.

There were significant differences among experimental groups plasma total protein, globulin, urea and creatinine concentration. No significant differences were observed between albumin, plasma hemoglobin, hematocrit, in groups albumin/globulin ratio (A/G ratio), uric acid, total bilirubin and alkaline phosphatase. Parity had a significant effect on creatinine and urea, hematocrit, hemoglobin, plasma concentration.

Key Words: Rabbits - New Zealand White female - Reproduction

- Blood Contents Poultry Waste Broiler Litter
- Broiler Manure.

# **ACKNOWLEDGEMENT**

I thank allah, the most gracious, most beneficent and merciful for the help and guidance to achieve goals and make them possible.

The author wishes to express his sincere appreciation to Prof. Dr. M. A. E1-FOULY, Professor of Animal Physiology and head of Animal Production Department, Faculty of Agriculture, Ain Shams University for suggesting the problem supervision and guidance throughout the course of this study. Without his help and support the completion of this work would have been quit impossible.

The author is grateful to Prof. Dr. S. O. AMIN, Professor of Animal Physiology, Faculty of Agriculture, Ain Shams University for supervision the work, providing farm animals and most facilities for this study, and giving sincere advice.

Deep thanks is due to Prof. Dr. M. A. Al-ASHRY, Professor of Animal Nutrition, Faculty of Agriculture, Ain Shams University for his help, providing animals and rations of the study and for his continuous interest in the work reported here.

Deep Thanks is due to Dr. F. A., KHALIL, Associate professor of Animal Physiology, Faculty of Agriculture, Ain Shams University, for his help in preparing the manuscript.

My thanks goes to Dr. M. H. SADEK, lecturer of Animal Breeding of this faculty for his valuable help on the statistical analysis of the data.

The author is grateful to Prof. Dr. H.M. Abdella, Cheif Research of Poultry Nutrition, Animal Production Research Institute And the Consultant of ATMIDA COMPANY for pelleting the exprimental diets.

I would like to express my sincere gratitude and thanks to all staff member of Animal Production Department of this faculty for their good spirit of cooperation as well.

I am greatly indebted and grateful to my late father, which his early and sudden death was indeed very sad and a great loss to me.

The author is greatly indebted and grateful to his mother, brothers Abd El-Aziz, Abd El-Hamid and his sister Hend for thier love, patience, advice and continuous help throughout the course of the study.

My sincere gratitude and thanks to all members of my family and friends for their good spirit and love which made the completion of this work possible.

### CONTENTS

	Pa	ae
I-	INTRODUCTION	1
II-	REVIEW OF LITERATURE	3
	1- POULTRY WASTE	3
	1-1- Chemical Composition Of Poultry Manure	
	And Poultry Litter	3
	1-2- Effect Of Poultry Waste Inclusion In Feed	
	Diets On Rabbit Performance	7
	1-3- Effect Of Urea As Non-Protein Nitrogen On	
	Rabbit Performance	8
	2- REPRODUCTIVE PERFORMANCE OF DOES	10
	2-1- The Breeding Season	10
	2-2- Number Of Services Per Conception	11
	2-3- Conception Rate (CR)	12
	2-4- Gestation Period Length	13
	3- PREWEANING PERFORMANCE OF YOUNGSTERS	15
	3-1- Litter Size At Birth	15
	3-2- Litter Size At Weaning	18
,	3-3- Litter Weight At Birth	20
•	3-4- Litter Weight At Weaning	22
	3-5- Daily Gain From Birth To Weaning	25
	3-6- Mortality Rate Of Youngters From Birth	
	To Weaning	27
	4- POSTWEANING PERFORMANCE OF YOUNGSTERS	31
	5- SOME BLOOD PARAMETERS IN RABBITS	33
	5-1- Packed Cell Volume (PCV)	33

	Page
5-2- Hemoglobin (Hb)	. 34
5-3- Total Protein	. 35
5-4- Albumin	. 36
5-5- Globulin And A/G Ratio	. 37
5-6- Urea	. 38
5-7- Creatinine	. 38
5-8- Uric Acid	. 39
5-9 Total Bilirubin	. 39
5-10 Alkaline Phosphatase	. 39
II- MATERIAL AND METHODS	. 41
1- EXPERIMENTAL ANIMALS	. 41
2- ANIMAL HOUSING	. 41
3- FEEDING TRIALS	. 42
4- BRIOLER LITTER	. 44
5- CHEMICAL ANALYSIS OF RATION	. 45
6- EVALUATION OF THE REPRODUCTION PERFORMANCE	
OF DOES	. 48
7- BLOOD SAMPLING	. 48
8- DETERMINATION OF SOME BLOOD PARAMETERS	. 49
8-1- Packed Cell Volume (PCV)	. 49
8-2- Hemoglobin (Hb) Determination	. 49
8-3- Total Protein Determination	. 50
8-4- Albumin Determination	. 51
8-5- Globulin Determination	. 52
8-6- Urea Determination	. 52
8-7- Creatinine Determination	. 53

	<u>Page</u>
8-8- Uric Acid Determination	54
8-9- Total Bilirubin Determination	55
8-10- Alkaline Phosphatase Determination	56
9- STATISTICAL ANALYSIS	58
IV- RESULTS AND DISCUSSION	59
1- BROILER LITTER	59
1-1- Chemical Composition	59
1-2- Rations	60
2- SOME REPRODUCTIVE PARAMETERS IN NEW ZEALAND	
WHITE DOES	62
2-1- Number Of Services Per Conception	62
2-2- Conception Rate (%)	. 65
2-3- Gestation Period Length	. 68
2-4- Conceptus Weight	. 74
3- PERFORMANCE OF LITTERS	. 86
A- PREWEANING PERFORMANCE	. 86
3-A-1- Litter Size At Birth	. 86
3-A-2- Litter Size At Weaning	. 88
3-A-3- Litter Weight At Birth	. 95
3-A-4- Litter Weight At Weaning	. 97
3-A-5- Daily Gain Of Youngsters From	
Birth To Weaning	. 104
3-A-6- Mortality Rate From Birth To	
Weaning	. 112
B- POSTWEANING PERFORMANCE	. 120
3-B-1- Daily Gain From 28 (Weaning)	

$\mathbf{P}_{i}$	age
To 63 Days Of Age	120
3-B-2- Mortality Rate Of Youngsters	
From 28 (Weaning) To 63 Days	
Of Age	128
4-SOME BLOOD PARAMETERS IN RABBITS	136
4-1- Packed Cell Volume (PCV)	136
4-2- Hemoglobin (Hb)	138
4-3- Plasma Total Protein Level	140
4-4- Plasma Albumin Level	142
4-5- Plasma Globulin Level	144
4-6- Albumin / Globulin Ratio (A/G Ratio)	152
4-7- Plasma Urea Level	152
4-8- Plasma Creatinine Concentration	154
4-9- Plasma Uric Acid Concentration	157
4-10- Plasma Total Bilirubin Concentration	159
4-11- Plasma Alkaline Phosphatase	
Concentration	159
V- GENERAL DISCUSSION	168
VI- SUMMARY	171
VII- REFERENCES	178
VIII- ARABIC SUMMARY	