

بسم الله الرحمن الرحيم



-C-02-50-2-





شبكة المعلومات الجامعية التوثيق الالكتروني والميكرونيلم





جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأقراص المدمجة يعيدا عن الغيار







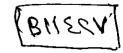
بالرسالة صفحات لم ترد بالأصل











STUDIES" ON LAYING HENS PERFORMANCE OF WHITE HOLLAND AND BROAD BREASTED BRONZE TURKEY BREEDS AS AFFECTED BY FEEDING SYSTEM

BY

ABDELLATIF EZZAT MASHALY

B.Sc. Agriculture

1979

Ain Shams University

THESIS

Submitted in Partial Fulfillment of
The Requirement For The Degree of
MASTER OF SCLENCE

IN

POULTRY NUTRITION

ANIMAL PRODUCTION DEPARTMENT

FACULTY OF AGRICULTURE

AL-AZHAR UNIVERSITY

CAIRO - EGYPT

1989

APROVAL SHEET

Name: Abd El-Latif Ezzat Mashaly.

Title: STUDIES ON LAYING HENS PERFORMANCE OF WHITE HOLLAND BREASTED BORONZE TURKEY BREEDS AS AFFECTED BY FEEDING SYSTEM.

Degree: M. Sc. (Agric. Sci. Animal Production, Poultry Nutrition)

Supervising Commettiee:

Prof. Dr.: N. F. Abdel-Hakim

Prof. of Poultry Nutrition. Faculty of Agriculture. Al-Azhar University.

Prof. Dr.: A. A. Amer

Prof. of Poultry Nutrition. Faculty of Agriculture. Al-Azhar University.

Dr.: S. I. El-Sharkawy.

Assistant prof. of poultry Nutrition. Faculty of Agriculture. Al-Azhar University

This thesis has been approved by:-

Prof. Dr. N. F. Abdel-Hakim N. F. Abdel-Hakim

Prof. of Poultry Nutrition. Faculty of Agriculture. Al-Azhar University.

K. A-El-Khimsany Dr. Kh. A. El-Khimsawy

Assistant Prof of poultry Nutrition. Faculty of Agriculture. University.

Dr.: N. N. El-Naggar. N.M.EL-Naggar

of Poultry Nutrition. Animal Production research Assistant Prof. Institute, Agriculture Research Center, Ministry of Agriculture.

(Commetiee in charge)

STUDIES ON LAYING HENS PERFORMANCE OF WHITE HOLLAND AND BROAD BREASTED BRONZE TURKEY BREEDS AS AFFECTED BY FEEDING SYSTEM

BY

ABDELLATIF EZZAT MASHALY

B.Sc. Agriculture

THESIS

Submitted in Partial Fulfillment of
The Requirement For The Degree of
MASTER OF SCIENCE

IN

POULTRY NUTRITION

ANIMAL PRODUCTION DEPARTMENT

FACULTY OF AGRICULTURE

AL-AZHAR UNIVERSITY

CATRO - FGYPT

1989

ACKNOWLEDGMENT

The author wishes to express his deep personal gratitude and sincere appreciation to Prof. Dr. N. F. Abdel-Hakim, Professor of Poultry Nutrition, Animal Production Department. Faculty of Agriculture. Al Azhar University, for his direct supervision, encouragement and his useful criticism throughout the research phases of this Study.

My great thanks are due to Prof. Dr. A. A. Amer., Professor of Poultry Nutrition, Animal Production Department. Faculty of Agriculture. Al-Azhar University, for his supervision, providing Facilities, guidance and support during the accomplishment of this study,

Many thanks are also due to Dr. S. I. El-Sharkawy. Assistant Professor of Poultry Nutrition, Animal Production Department, Faculty of Agriculture, Al-Azhar University, for his good advice which can not be forgotten.

My special thanks to Dr. T. Yonis, Lecturer of Poultry Nutrition
Animal Production Department. Faculty of Agriculture. Al-Azhar
University, for his advice and his good help during this work.

The author also wishes to express his gratitude to staff members of Poultry Experiment Station, Animal Production Department, Faculty of Agriculture, Al-Azhar University, for thier co-operation and good help during the experimental work, specially present my thanks to Mr. Khaled, Mr. Aly, and Eng. Ahmed. F.

At last, I wish to present my thanks to my family for encouragement and to all whom helped me and I did not remember.

At first and end I thank God.

CONTENTS

		Page
1.	INTRODUCTION.	l
2.	REVIEW OF LITERATURE.	4
2.1.	Effect Of Protein Level During Growing And Prebreeder	
	Period On Performance Of Turkey Females.	4
,2.1.1	Body Weight And Feed Efficiency	4
/2.1.2.	Age At Sexual Maturity.	13
, 2.1.3.	Egg Production.	16
2.2.	Effect Of Protein Level During Breeding Period On	
	Laying Hens Performance.	18
2.2.1	The Protein Requirement Of The Turkey Breeder Hen.	18
, 2.2.2	Fertility, Hatchability And Egg Production.	21
2.3.	Proteins And Amino Acids In Turkey And Poultry	
	Nutrition.	25
2.3.1	Proteins And Amino Acids Availability.	25
2.3.2.	Amino Acid Interactions.	27
2.4.	Some'Important Plant Protein Sources.	30
2.4.1.	Cotton Seed Meal.	30
2.4.2.	Soyabean Meal.	32
2 4 3	Voset Protein.	33

	2.5.	All Plant Protein Rations In Poultry Nutrition.	36
	2.5.1.	Effect Of Protein And Amino Acids On Growth	
		Performance And Carcass Characteristics Of Toms.	38
	3.	MATERIALS AND METHODS.	43
_	3.1.	Egg Production Experiment.	43
	3.2.	Fattening Toms Experiment.	45
	4.	RESULTS AND DISCUSSION.	48
	4.1.	Experiment I: Effect Of Protein Level On Performance	
		Of Turkey Females.	48
_	4.1.1.	Growth Performance From 26 To 48 Weeks Of Age.	48
	4.1.1.1	Body Weight.	48
	4.1.1.2	Feed Intake And Feed Efficiency.	55
	4.1.1.3	Mortality Rate.	61
_	4.1.2.	Laying Performance.	62
/	. 4.1.2.1.	Age At Sexual Maturity.	62
/	4.1.2.2.	Egg Production.	66
j	4.1.2.2.1.	Number Of Eggs Laid Per Hen.	66
_	4.1.2.2.2.	Total Egg Mass Laid Per Hen.	69
	4.1.2.3.	Feed Intake And Feed Efficiency.	75
_	4.1.2.4.	Fertility.	78
	4.1.2.5.	Mortality.	79
	4.2.	Experiment II: Effect Of Protein Source On Growth	

	And Fattening Performance Turkey Males.	81
4.2.1.	Growth Performance.	81
,4.2.1.1.	Body Weight.	81
4.2.1.2.	Feed Intake And Feed Efficiency.	86
4.2.1.3.	Mortality.	89
,4.2.2.	Carcass Characteristics.	91
4.2.3.	Coasts And Returns	101
5.	SUMMARY AND CONCLUSION.	105
6.	REFERENCES.	109
7.	ARABIC SUMMARY.	137

•

1- INTRODUCTION

If the present protein situation in the world is considered together with the increase in population specially manifasted in the developing countries, The picture would be very dark.

same time, with the extensive increase in human In the population and the rais in their standard living, there will be a. continuous increasing demands for animal products such as meat, eggs and milk. It is a matter of fact that poultry including turkey have higher relative growth rate than sheep and cattle. So, turkey meat could have a great role in solving such problem of protein defficiency. Continuous efforts are devoted by different authorities to introduce poultry industry in Egypt to improve the efficiency of poultry production in both Quality and quantity. The increase in Poultry industry in A.R.E. still relatively small to face increased demands for poultry products.

Concerning turkey production, considerable controversy exists among poultry scientists concerning the protein requirement of turkey breeder hen. The National Research Council (N.R.C., 1971) listed the protein requirement for turkey breeders as 14% with 2850 kcal ME/kg of diet. Results reported in the literature for the requirement of the turkey hen range from 10% to 25% protein.

A larger proportion of the feed consumed by turkeys than for

chickens is used for maintenance and it is well known that the protein requirement for maintenance is less than for egg production. Therefor, one would expect a lower protein requirement for turkeys than for chickens with diets of similar composition. So, we need more experiments for the protein level required for optimum performance of turkey hens.

The N.R.C. (1977) presents no estimate of the protein requirement of turkey breeder males. Besides, dietary protein requirements of turkey toms during fattening phase have been studied by some researchers with conflicting results.

As animal proteins are generally more expensive than plant proteins, and as in many places in the world their production is limited, nutritionists started to work to improve plant proteins nutritionally.

However, Labib et al. (1970) used all plant proteins rations for feeding laying hens.

In poultry industry, the price of the feed is the most important factor in determining the price of the product, due to the fact above, many attempts were made to cut feeding expenses down to the minimum level by: