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بسم اللّه الرحمن الرحيم

مركز الشبكات وتكنولوجيا المعلومات

قسم التوثيق الإلكتروني

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم باللّه العظيم أن المادة التي تم توثيقها وتسجيلها

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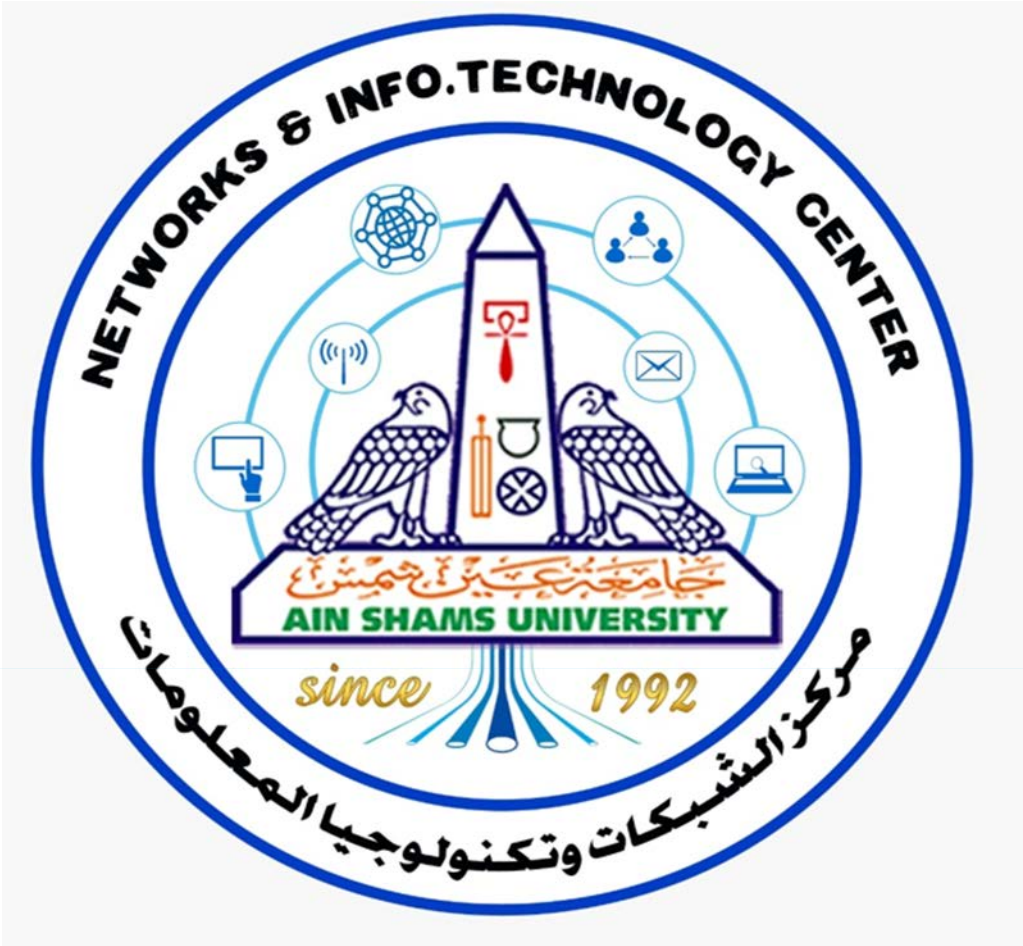

بعض الوثائق الأصلية تالفة
وبالرسالة صفحات لم ترد بالأصل

EFFECT OF REPLACING LINSEED MEAL FOR SOYBEAN MEAL ON PERFORMANCE OF GROWING RABBITS

BY

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B. Sc. Agric. (Poultry Production) Tanta Univ. *(1996)*

THESIS

Submitted to the Graduate Division in Partial Fulfillment of the Requirements for the Degree of

MASTER OF SCIENCE

IN

Poultry Production

Department of Poultry Production
Faculty of Agriculture
Kafr El-Sheikh
Tanta University

2001

APPROVAL SHEET

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EFFECT OF REPLACING LINSEED MEAL FOR SOYBEAN MEAL ON PERFORMANCE OF GROWING RABBITS

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ACKNOWLEDGMENT

*All thanks are due to "**MERCIFUL ALLAH**" for his continuous help through this study and all my life.*

*I am extremely grateful to **Prof. Dr. NEAMAT, A. BADAWAY**, Professor of Poultry Nutrition, Dept. of Poultry Prod. Kafr El- Sheikh Fac. of Agric., Tanta University, for her active supervision, continual encouragement, and constructive criticism during the progress of this thesis.*

*Great acknowledgment to **Dr. KHAIRY ALY AMBER** Lecturer of Poultry Nutrition, Dept. of Poultry Prod. Kafr El-Sheikh Fac. of Agric., Tanta University, for his sincere help in designing, preparing, supervision, scientific advices and criticism throughout this study, and my deepest thanks are also for his sincere cooperation in reading and correcting this manuscript, besides his helpful discussion.*

*Deep gratitude and great acknowledgment is also given to **Prof. Dr. M. M. El- HABBAK**, Professor of Poultry physiology, and Chairman of Poultry Production Department, Kafr El-Sheikh Fac. of Agric., Tanta University, for his encouragement, and sincere scientific physiological advices through the course of this investigation.*

*Deep sincere thanks and appreciation are indebted also to **Prof. Dr. K. M. SALEH.** Prof. of Poultry Breeding, Dept. of Poultry Prod., Kafr El-Sheikh Fac. of Agric., Tanta University, for his continuous help and offering all facilities needed.*

*Appreciation and thanks are due to **Dr. H. H. YOUNIS,** Lecturer of Poultry Breeding, Dept. of Poultry Prod., Kafr El- Sheikh Fac. of Agric., Tanta University, for his kind help in the statistical analysis and running the data in the computer.*

Lot of thanks and appreciation are extended to all members of Poultry Production Department, Kafr El- Sheikh, Fac. of Agric., Tanta University, for their kind help and assistance to complete this work.

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LIST OF ABBREVIATION

AB	Abdominal Fat
BL	Blood
Ca	Calcium
Car	Carcass Percentage
CC	Caecum Content
CF	Crude Fiber
CHO	Cholesterol
CO	Caecum Organ
CP	Crude Protein
DCP	Digestible Crude Protein
DE	Digestible Energy
DM	Dry Matter
DP	Dressing Percentage
DPH	Dressing Percentage With Head
E. EF	Economic Efficiency
EE	Either Extract
FC	Feed Conversion
FI	Feed Intake
GE	Gross Energy
GL	Glucose
LM	Linseed Meal
LSM	Least Square Mean
Lys.	Lysine
MET	Methionine
N	Nitrogen
NFE	Nitrogen Free Extract
NZW	New Zealand White
OM	Organic Matter
P	Phosphorus
PI	Performance Index
R. E. EF	Relative Economic Efficiency
S	Significance
SC	Stomach Content
SEM	Standard Error of Means
SM	Soybean Meal
SO	Stomach Organ
TDN	Total Digestible Nutritive
TP	Total Protein
TRI	Triglucerides

INTRODUCTION

INTRODUCTION

Feed is the largest single cost item in rabbit production, representing at least 65% **(Marai, 1998)**. Therefore, one of today's real challenge for rabbit feed formulation is to produce an efficient combination of feedstuffs that will meet the absolute nutrient requirements of the rabbit and reduce feed cost and any effort being made to reduce feed cost will increase the net revenue to the producer.

Protein is the most important component of diets which commonly depends largely on the traditional sources of protein as soybean meal which is used as a main source of protein in rabbit diets. According to the shortage and consequently the high cost of this protein source in addition to the limitations in the quantitative and qualitative characteristics of its protein, so there is a need search for untraditional sources of protein to solve feed shortage problems and produce less cost diets.

Linseed is one of the major oilseed crops, its oil finds important uses in paints and other industries. The cake is generally used as a cattle feed. Linseed protein is reported to be superior to groundnut protein but the cake seems to have little use in poultry feeds because of the presence of some antinutritional factors and high level of mucilage (poly saccharide complex formed varying from sugar and uronic acid units) in linseed meal from 12.2% (**Madhusudhan *et al.*,**

1986) to 20% (**El-Khimsawy, 1993**). Rabbits can utilize the mucilage more efficiently than poultry because of the presence of microfloura especially the fibrolitic bacteria in their caecum. In Egypt, linseed is crushed by expellers and the de-oiled remaining meal contains 25-35% protein. Yearly production of linseed meal in Egypt has been reported to be about 20.000 tons (**El-Khimsawy, 1990**).

The present study was carried out to investigate the possibility of including different levels of linseed meal in growing New Zealand White rabbit diets at the expense of soybean meal and to study its effects on the performance, digestibility of nutrients, coprophagy, some blood constituents, carcass traits, meat quality and economic efficiency.

REVIEW OF LITERATURE

REVIEW OF LITERATURE

2.1. Chemical Composition of Linseed Meal:

2.1.1. Nutrient contents in linseed meal:

Dry matter (DM), crude protein (CP), ether extract (EE), crude fiber (CF), nitrogen free extract (NFE) and organic matter (OM) contents in linseed meal (LM) were determined by several authors. Results of chemical composition and nutrient contents in linseed meal obtained by several investigators are listed in Table 1, which reveale that DM content in LM ranged from 91.0% **(Abou-Raya, 1967)** to 92.5% **(Madhusudhan *et al.* , 1986).** On the other hand, the lowest CP content in LM (28.3%) was reported by **Madhusudhan *et al.* (1986),** while the highest value was obtained by **Mandokhot and Singh (1979)** being 36.6%.

Concerning the EE content, the values differed from 5.88% **(Abbas *et al.* , 1990)** to 10.0% **(Abou-Raya, 1967).** Results presented in Table 1 revealed also that differences in CF content among the different investigators were somewhat low. The lowest CF content (7.0%) figured out by Abou-Raya (1967), while the highest value (10.62%) was reported by **Abbas (1990).**

The lowest NFE content (31.2%) was reported by **Mandokhot and Singh (1979),** while the highest (42.3%) was illustrated by **Madhusudhan *et al.* (1986).**