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Title of Thesis: USE OF SOME AGRO-INDUSTRIAL BY-PRODUCTS IN OSTRICH DIETS
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ABSTRACT

This search aimed to study the effect of completely replacing soybean meal with either corn gluten meal or cotton seed meal and completely replacing clover hay with radicel in ostrich diets on their growth performance taking in consideration the economical aspects. Two parts were conducted in Europian village ostrich farm (special farm). In the 1st part, 15 ostrich birds aged 5 months were distributed equally into 5 groups, each contained three replicates. Five isocaloric (2450 Kcal DE/Kg) and isonitrogenous (19 % CP) experimental grower diets and other five finisher diets (2300 Kcal/Kg , 17 % CP) were formulated for feeding ostrich during growing (5-9 months) and up to 12 months of age, respectively. In the 2nd part, 5 digestion trials were carried out to determine to nutrients digestibility and feeding value of the finisher diets in addition to measuring some blood constituents. Results obtained showed that corn gluten, cotton seed meal and radicel could be used in feeding ostrich. However, the replacement level must be less than 100 %, where the control group surpassed other experimental groups with significant differences observed in some parameters, although no significant differences were detected in other parameters. Therefore, no significant differences were found among all dietary treatments in economical efficiency values. The results of digestibility and feeding value of experimental diets showed also no significant differences between treatments where corn gluten meal and cotton seed meal completely replaced soybean meal and also between treatments in which radicel completely replaced clover hay. Moreover, no significant differences were detected among treatments in plasma cholesterol, ALT , AST, calcium and phosphorous. All these findings confirmed the suitability of using the tested agro-industrial by-products in ostrich diets, however, the replacement level could be lowered than 100 % to obtain the best results from the nutritional and economical points of view.

CONTENTS

LIST OF ABBREVIATIONS

ADF	Acid detergent fiber
ALT	Alanine transaminase
AME	Apparent metabolic energy
AP	Available phosphorus
ARC	Agriculture Research Center
AST	Aspartate transaminase
BWG	Body weight gain
Co	Centegrate
Ca	Calcium
CF	Crude fiber
CFD	Crude fiber deduction
CGM	Corn gluten meal
CH	Clover hay
CP	Crude protein
CSM	Cotton seed meal
Cys	Cystine
DCF	Digestible crude fiber
CPD	Digestible crude protein
DE	Digestible Energy
DEE	Digestible ether extract
Di-Ca-P	Di-calcium phosphate
DM	Dry matter
DNFE	Digestible nitrogen free extract
EE	Ether extract
EEF	Economic efficiency
F	Finisher
FC	Feed consumption

FE	Feed efficiency
GE	Gross energy
g	Gram
G	Grower
IU	International unite
K cal	Kilo calorie
Kg	Kilogram
LBW	Live body weight
LE	Egyptian pound
ME	Metabolizable energy
Met	Methionine
Min	Minerals
N	Nitrogen
Na cl	Natrium chloride
NDF	Neutral detergent fiber
NFE	Nitrogen free extract
NRC	National Research Council
OM	Organic matter
P	Probility
RCL	Radicel (malt sprouts or Brewer's grains)
RGR	Relative growth rate
SBM	Soybean meal
SV	Starch value
TDN	Total digestible nutrients
TPU	Total protein utilization
Vit	Vitamin