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Jahangir Mahmood

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CONTENTS

CHAPTER	SERIAL	SUBJECTS	PAGE No.
		Authorization	
		Acknowledgements	i
		List of Tables	iv
		List of Figures	v
		List of Abbreviations	v-vii
		Abstract	viii-ix
Chapter 1		Introduction	1-5
Chapter 2		Review of Literature	6-29
	2.1	Background	6-8
	2.2	Sources of protease enzymes	8-9
	2.3	Types of protease enzymes	9-11
	2.4	Chemistry of protease enzymes	11-13
	2.5	Role of protease enzymes on the protein digestion	13-16
	2.6	Role of protease on amino acids utilization	16-17
	2.7	Role of proteases enzymes on the nitrogen and environmental condition	17-20
	2.8	Role of microbial enzymes on protease inhibitors	20-21
	2.9	Impact of exogenous enzymes (proteases) on the growth responses of broiler chicken	21-22
	2.10	Effect on the meat, carcass characteristics and gastro-intestinal development of broiler chicken	22-24
	2.11	Effect on the gut health and intestinal morphology of broiler chicken	24-26
	2.12	Effect on the blood metabolites of broiler chickens	26-27
	2.13	Effect of exogenous enzymes (protease) on the	27-28

	survivability of broiler	
2.14	Effect of exogenous enzymes (protease) on the cost-effectiveness or profitability of broiler chicken	28-30
2.15	Importance of the study	30-31
2.16	Conclusion	31
Chapter 3	Materials and methods	32-47
3.1	Statement of the experiment	30
3.2	Enzyme composition and activity	30
3.3	Preparation of the experimental shed	30-32
3.4	Collection of day-old broiler chicks and experimental design	32-33
3.5	Collection of the experimental feed and feedstuffs	38
3.6	Formulation of test diets	39
3.7	Feed grinding, mixing and preparing the diets	39-42
3.8	Management	42-45
3.9	Data and record keepng	46
3.10	Calculation of data	43-47
3.11	Sample processing and Analyses	47-48
3.12	Evaluation of parameters	48-49
3.13	Production cost	49
3.14	Statistical analyses	50
Chapter 4	Results	51-59
Chapter 5	Discussion	60-64
Chapter 6	Conclusions and recommendations	65-66
Chapter 8	References	67-78
	Brief bio-data of the author	79

LIST OF THE TABLES

SL	TITLE OF THE TABLES	PAGE NO
01	Layout of the experiment	34
02	Nutrient composition of ready-made starter diet	38
03	Ingredient and nutrient composition of test diet for broiler from	41
04	Vaccination schedule	44
05	Body weight (BW) of broiler fed enzyme supplemented diets	52
06	Feed intake (FI) of broiler fed enzyme supplemented diets	53
07	Feed conversion ratio (FCR) of broiler fed enzyme supplemented diets	54
08	Meat yield traits (g/b) of broiler fed enzyme supplemented diets on 33days	55
9	Visceral organ weight (g/b) of broiler fed enzyme diets on 33days	56
10	Blood metabolites of broiler fed enzyme supplemented diets on 33days	57
11	Intestinal morphometric measurements of broiler fed enzyme diets on 33d	58
12	Cost-benefit analyses of broiler fed enzyme diets on the last day of trial	59

LIST OF THE FIGURES

SL	TITLES OF THE FIGURES	PAGE NO.
01	Action of aminopeptidases and carboxypeptidases	12
02	purchased Day 1 chick	32
03	Disinfection of pens Transportation of chick	35
04	Weighing of micronutrient	35
05	Mixing of feed ingredients	35
06	Mixing of feed ingredients	35
07	packaging of test diets with marking	35
08	Prepared brooding pen	36
09	Spreading pre-starter feed	36
10	Floor space for 7 birds in each pen	36
11	Floor space for 7 birds in each pen	36
12-	Feeding and watering of chick	36
13	Diluted vaccine	36
14	Vaccination via eye drop	37
15	Measuring feed weight for feed intake record	37
16	giving Diet from marked specific packet to specific pen	37
17	Weighing of birds	37
18	Post-mortem of birdsFig	37
19	Dissection of Bird	37
20	Livability of broilers fed protease diets on 35 days; Bar with similar letter has no significant difference ($P>0.05$) among treatments	50

LIST OF THE ABBREVIATIONS

ABBREVIATIONS	ELABORATIONS
<	Less Than
>	Greater Than
AA	Amino acids
ANOVA	Analyses of Variance
BD	Basal Diet
Ca	Calcium
CF	Crude Fiber
Cm	Centimeter
CP	Crude Protein
CRD	Completely Randomized Design
CVASU	Chattogram Veterinary and Animal Sciences University
D-AA	Dextrorotatory Amino Acids
DL Met	Dextrorotatory and Levorotatory Methionine
DM	Dry Matter
DOC	Day Old Chick
e.g.	Example Given
EE	Ether Extract
etc.	Etcetera
FCR	Feed Conversion Ratio
FI	Feed Intake
G:F	Feed to Gain Ratio

Gm/Kg Gram Per Kg

ABBREVIATIONS ELABORATIONS

GSH	Glutathion
<i>i.e</i>	That is
KMnO ₄	Potassium Permanganate
L-AA	Levorotatory Amino Acids
LW	Live Weight
MDA	Melondi-Aldehyde
ME	Metabolizable Energy
Met-HA-Ca	Methionine Hydroxy Analogue Calcium
MHA-FA	Methionine Hydroxy Analogue Free Acids
ml	Milli-litre
NFE	Nitrogen Free Extract
NRC	National Research Council
°C	Degree Celsius
P	Phosphorus
PC	Protein Concentration
Sq. Ft	Square Feet
TAC	Total Anti-oxidant Capacity
Temp.	Temperature
Tk	Taka (Bangladesh Taka)
TME	Total Metabolizable Energy
UA	Uric Acid
UA	Uric Acid

Abstract

This experimental study was conducted to investigate the effects of diets and enzyme supplementation on the live weight (LW), feed intake (FI), feed conversion ratio (FCR), viability, blood metabolites, meat yield traits, and cost of production of broilers. In a 2×2 factorial experiment, having two diet types [maize-soya (MS) based and maize-wheat-soya (MWS) based] and two enzymes levels (with or without), broiler chicks (n=112; Cobb500) were assigned to four dietary treatments (MS-, MS+, MWS- and MWS+) with four replicates, seven chicks per replicate in a CRD. The chicks were fed on the ready-made broiler diet up to 14d, after that formulated diets were supplied the birds *ad libitum* up to 33d. All the diets were iso-caloric and iso-nitrogenous in nature, and supplemented with or without enzymes in mash form. Data revealed that diets (MS- and MWS-) had no significant effect ($P>0.05$) on the LW, FI and FCR of broilers, but enzyme diets (MS+ and MWS+) improved ($P<0.5$; $P<0.01$) the LW, FI and FCR on day 33. Enzyme, diet and their interaction had no influence ($P>0.05$) on the viability of broiler. The results of dressing percentage, thigh weight, breast weight, abdominal fat content of broilers were affected ($P>0.05$) by enzyme only except for drumstick weight. Diet and enzyme and diet had no influence ($P>0.05$) over the breast weight, but its interaction influenced ($P<0.05$) the breast weight (%) of birds. Only liver and pancreas weights were increased ($P<0.05$) by enzyme diet, but the diet and its interaction had no influence ($P>0.05$) over the gastrointestinal organs of the broiler. The data showed that diet and interaction had no significant effect ($P>0.05$) on the blood profiles of broiler except for triglyceride (TG), which is influenced ($P<0.05$) by dietary treatment only. Only glucose (Glu) level was increased ($P<0.01$) by enzyme diet. Apart from this, TG ($P<0.087$) and uric acid ($P<0.09$) were also slightly influenced by enzyme supplemented diet. The results of intestinal morphometric measurements *i.e* villus height (VH), crypt depth (CD), villus width, VH:CD ratio, and surface area of broilers were increased by enzymatic diet, diet and interaction had no significant effect ($P>0.05$) over this gut morphology. Total cost of production (Tk/Kg live broiler) was significantly ($P<0.05$) less for the birds fed enzyme-supplemented diets (MS+, MWS+). Higher ($P<0.01$) profit margin was obtained for the supplemented dietary group. It could be concluded that broilers might respond positively to enzymatic diets under farming condition.

Key words: Growth, protease, viability, blood metabolites, carcass traits, gut morphology, broiler, profitability

