EVALUATION OF GROWTH PERFORMANCE, CARCASS CHARACTERISTICS AND SERUM BIOCHEMICAL PARAMETERS OF BROILER BY SUPPLEMENTATION OF MAHOGANY AND CHALTA LEAVES

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September 2022

Authorization

Myself Najia Sharmin Mukta, confirming the authenticity of all the data and contents in this report. All the information collected from books, national and international journals, websites and other references have been acknowledged accordingly.

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This is to certify that we have examined the above Master's thesis and have found that is complete and satisfactory in all respects, and that all revisions required by the thesis examination committee have been made

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Abbreviations

ADG	=	Average daily gain
ADFI	=	Average daily feed intake
ANOVA	=	Analysis of variance
BCRDV	=	Baby Chick Ranikhet Disease Vaccine
CF	=	Crude fiber
CP	=	Crude protein
CVASU	=	Chittagong Veterinary and Animal Sciences University
DM	=	Dry matter
EE	=	Ether extract
FCR	=	Feed conversion ratio
gm	=	Gram
IBD	=	Infectious Bursal Disease
Kg	=	Kilogram
LW	=	Live weight
ME	=	Metabolizable energy
MDA	=	Malondialdehyde
NS	=	Non-significant
SEM	=	Standard error of mean

Abstract

The purpose of the study was to assess the dietary effects of dry mahogany and chalta leaves supplementation on growth performance, carcass characteristics, biochemical parameter and oxidative stability of meat in broiler. The study was conducted by a total of 96 unsexed Ross 308 day old chicks were distributed in one control and three dietary treatment groups where T_0 = Control, represent the birds fed diet without mahogany and chalta leaves in ration, T_1 = Inclusion of 0.4% dried mahogany leaves in ration, T_2 = Inclusion of 0.4% dried chalta leaves in ration and T_3 = Inclusion of 0.2% dried mahogany + 0.2% dried chalta leaves in ration. Each treatment also randomly sub grouped into three replications with 8 birds in each a completely randomized design. The result revealed that overall average daily gain (ADG) ($p<0.005$) and average daily feed intake (ADFI) ($P<0.0001$) differed significantly in all treatment groups compared to the control. A better overall FCR was observed in treatment groups significantly decreased than control group. There was a significant increased ($P<0.05$) HDL level but not significant effect of result observed in LDL, triglyceride and blood cholesterol level. A significant difference in CP, EE and DM and Ash did not differ significantly ($p>0.05$). Carcass parameters including dressed weight, drumstick weight and heart weight was significantly differed in treatment group than control group. Meat thiobarbituric acid reactive substance (TBARS) had significantly reduced average in all treatment group($P<0.005$). More net profit was earned from dry Mahogany and Chalta mixed leaves supplement group than control. Finally, dry Mahogany and Chalta leaves increased ADG, serum HDL level, net profit and decreased FCR, and TBARS of meat. Hence, dry Mahogany and Chalta leaves meal showed beneficial effects on broiler and can be a potential source to be used as feed additive in broiler.

Keywords: Broiler, Mahogany, chalta, growth performance, carcass characteristics, meat quality.