

Acknowledgements

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LIST OF ABBREVIATIONS

Abbreviations	Elaborations
ANOVA	Analysis of Variance
BCRDV	Baby Chicks Ranikhet Diseases Vaccine
Ca	Calcium
P	Phosphorus
CF	Crude Fiber
CP	Crude Protein
CRD	Completely Randomized Design
DDPS	Department of Dairy and Poultry Science
CVASU	Chattogram Veterinary and Animal Sciences University
DOC	Day Old Chick
g/b	Gram per bird
Mg/dl	Milligram Per Deciliter
g/l	Gram Per Litter
DM	Dry Matter
EE	Ether Extract
FCR	Feed Conversion Ratio
LWG	Live weight gain
Kg	Kilogram
MJ	Mega Joule
MS	Master of Science
NFE	Nitrogen Free Extract
PRTC	Poultry Research and Training Center
e.g	Example Given
et al.	And his associates
etc	Et cetera
ft	Feet
<i>i.e.</i>	That is
ml	Mililitre
BW	Bone Weight
BL	Bone Length
Sq ft	Square Feet
ME	Metabolizable Energy
%	Percentage
WHC	Water Holding Capacity
TME	True Metabolizable Energy
<	Less Than
>	Greater Than

Abstract

The study was performed for investigating the dietary effect of different levels of Oyster mushroom (*Pleurotus ostreatus*) on the productivity and meat quality of broiler chicken. Day-old broiler chicks (Ross 308, n=96) of either sex was assigned randomly into four dietary treatments, i.e., T₀ (Control), T₁(0.5 % mushroom), T₂ (1 % mushroom) and T₃ (1.5 % mushroom) in a CRD. Each treatment was replicated four times with six birds per replicate. Chicks were reared in the battery cages of equal size entire the trial period from d1-34d. Starter diet (crumble-pellet) was fed the chicks up to 14d, after that test diet was fed the birds rest of the trial period. All the formulated diets were iso-caloric and iso-nitrogenous. Data on feed intake (FI), live weight (LW), feed conversion ratio (FCR) and livability were recorded. Besides, bone morphology and blood metabolites were assessed from the samples collected on d34. Carcass yield traits, relative organ weights, leg bone traits and profitability were measured on d34. The data revealed that FI, LW, FCR and viability % of broilers were not influenced ($P>0.05$) by the dietary treatments. The LW of broiler fed diet (T₃) tend to be significant ($P=0.09$). The highest LW ($P<0.09$) was observed in T₃ diet and the lowest LW found in T₀ diet during d1-34d. The visceral organ weights (proventriculus, gizzard, liver, heart, pancreas) were unaffected ($P>0.05$) between treatments. The results of meat yield traits revealed that dressing %, thigh weight, breast weight, wing weight, drumstick weight, and abdominal fat content percentages etc., were found similar ($P>0.05$) between treatments. Blood serum concentrations (glucose, total protein, albumin, triglyceride) did not differ ($P>0.05$) except for creatinine and uric acid. The result of bone morphology revealed that except for bone weight, no other parameters were found significant ($P>0.05$) between treatments. Higher profit ($P<0.01$) and lower production cost ($P<0.05$) were observed in the birds fed T₃ diet group than that of other diet groups. It can be concluded that broiler fed on increased level of mushroom diet (T₃) could show better growth responses with low-cost involvement and higher profitability under farming condition.

Keywords: Mushroom, growth responses, broiler, carcass traits, dressing yield, survivability, blood metabolite, bone quality, profitability.