

EFFECT OF FEEDING DIFFERENT LEVELS OF BLACK PEPPER ON CARCASS CHARACTERISTIC AND ORGANOLEPTIC PROPERTIES ON JAPANESE QUAIL

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Abstract: An experiment was conducted in Japanese quail by adding black pepper at 0, 0.1, 0.2 and 0.3 per cent level in basal Japanese quail diet for four week to study the effect of Black pepper on carcass characteristics and organoleptic properties. The result of the experiment revealed that dietary inclusion of black pepper had no significant influence on the carcass characteristic and organoleptic properties of Japanese quail reared in an open sided cage housing system.

Keywords: Japanese quail, Black pepper, Carcass characteristic, Organoleptic properties.

INTRODUCTION

Black pepper is a phytoadditive which has antibacterial, antimicrobial, anticancer and antioxidant properties. This improves the production performance of poultry. Various feed additives are available for inclusion in poultry diet to improve its performance. Every antibiotic has a certain withdrawal time. If the antibiotics are not withdrawn from the poultry diet before slaughter, it will lead to the presence of antibiotic residues in poultry meat and consumption of this type of meat would lead to consumer hazards. Supplementation of phytoadditives, containing antibacterial, antimicrobial, anticancer and antioxidant properties will lead to an improved keeping quality of meat

MATERIAL AND METHODS

A biological experiment was conducted by using 240 day old Japanese quail chick belonging to single hatch. These chicks were randomly grouped into 4 treatments with 6 replicates of 10 chicks in each replicates. All the birds were reared under standard managerial conditions in an open sided cage house up to four weeks of age. The locally available black pepper was purchased and added to the standard Japanese quail diet to form different experimental diets. At the end of the study period (4weeks), 2 birds from each replicate (one male and one female) were slaughtered and the data on carcass characteristics

and organoleptic characteristics was recorded. The data collected were subjected to statistical analysis as per the method suggested by Snedecor and Cochran (1989). The treatment groups of the experiment were as follows:

Treatment groups	Particulars	Number of replicate per treatment	Number of birds per replicate	Total number of birds per treatment
T ₁	Control (Standard Japanese quail diet)	6	10	60
T ₂	Control + 1g Black pepper/ kg of feed	6	10	60
T ₃	Control + 2 g Black pepper / kg of feed	6	10	60
T ₄	Control + 3 g Black pepper / kg of feed	6	10	60
Total				240

RESULT AND DISCUSSION

The mean (\pm S.E.) carcass characteristics and organoleptic properties of Japanese quail in open side cage house from one to four week of age as influenced by dietary supplementation of different levels of black pepper are presented in Table I and Table II respectively.

The analysis of variance of data revealed that there was no significant difference in the carcass characteristics and organoleptic properties between treatment groups. Among the black pepper supplemented group there was no significant difference.

The results are incongruous with finding of Myandoap and Mansoub (2011) Ghaedi *et al* (2013), Shverdi *et al* (2013), Tripathi *et al* (2013) Elkhair *et al* (2014) and Tazi *et al* (2014) who recorded significant increase in carcass yield.

SUMMARY

It has been concluded that by supplementing different levels of dietary black pepper to Japanese quails reared under an open sided cage housing system, has no significant influence on carcass yield and organoleptic characteristics.

Table I: Mean (\pm S.E.) carcass characteristics of Japanese quail from 1 to 4 weeks of age as influenced by different levels of dietary black pepper

Treatment	Carcass yield
T ₁	69.36 \pm 0.74
T ₂	69.29 \pm 0.57
T ₃	69.08 \pm 0.57
T ₄	69.37 \pm 1.06

Value given each cell is the mean of 12 observations

Table II: Mean (\pm S.E.) organoleptic properties of breast meat of Japanese quail at 35th day of age as influenced by different levels of dietary supplementation of black pepper

Treatment groups	Appearance	Flavour	Tenderness	Juiciness	Mouth coating	Overall acceptability
T ₁	6.97 \pm 0.33	6.67 \pm 0.33	6.67 \pm 0.04	6.50 \pm 0.0	7.00 \pm 0.00	6.83 \pm 0.17
T ₂	7.10 \pm 0.10	6.67 \pm 0.33	6.50 \pm 0.03	6.90 \pm 0.29	7.00 \pm 0.00	6.90 \pm 0.00
T ₃	7.08 \pm 0.08	7.00 \pm 0.00	6.17 \pm 0.17	7.40 \pm 0.29	6.67 \pm 0.33	7.30 \pm 0.17
T ₄	7.15 \pm 0.12	7.00 \pm 0.00	6.50 \pm 0.03	7.33 \pm 0.33	6.33 \pm 0.33	7.20 \pm 0.17

Value given in each cell is the mean of six observations

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