

EFFECT OF DE-OILED RICE BRAN ON THE CARCASS CHARACTERISTIC AND BLOOD PROFILES IN BROILERS*

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ABSTRACT

One hundred nos. of twenty day old commercial broiler chicks were divided into four groups (T_0 - control, T_1 , T_2 , T_3) of 30 chicks. Each were allotted to four iso-nitrogenous dietary treatments, viz. D_0 , D_1 , D_2 and D_3 , containing 0 (control), 10, 15 and 20 per cent of DORB for 6 weeks. At the end of the feeding period, 5 birds from each group were slaughtered for study of the carcass characteristics. The dressing percentage, eviscerated yield and giblet yield were comparable among the groups. The percent moisture, protein, fat and total ash content of the meat did not vary significantly ($P>0.05$) among the groups. The blood glucose, total serum protein, albumin and albumin:globulin (A:G) ratio were comparable among the groups.

Key words : DORB, Broilers, Carcass characteristics, Blood profiles

Deoiled rice bran (DORB), a by-product of rice milling industry is available in bulk at reasonable price. DORB contains crude protein 15.97 ± 0.31 , ether extract 1.27 ± 0.03 , crude fibre 16.43 ± 0.14 , total ash 11.53 ± 0.07 and nitrogen free extract (NFE) 54.80 ± 0.42 per cent on dry matter basis. DORB can be included in the broiler ration up to 20 per cent level without affecting the performance of broilers⁶. The present experiment was undertaken to study the effect of different levels of DORB in the diet on the carcass characteristics and blood profiles of broilers.

MATERIALS AND METHODS

One hundred twenty day old commercial broiler chicks divided into four groups (T_0 - control, T_1 , T_2 , T_3) of 30 chicks each were allotted to four iso-nitrogenous dietary treatments, viz. D_0 , D_1 , D_2 and D_3 , containing 0 (control), 10, 15 and 20 per

cent of DORB for 6 weeks. Blood samples were collected from five birds of each group at weekly interval for estimation of blood glucose, total serum protein, serum albumin and blood urea. The serum globulin is calculated out by the difference between total serum protein and serum albumin. At the end of the feeding period, 5 birds from each group were slaughtered for study carcass characteristics. The birds were starved overnight, but water was provided *ad libitum* before slaughtering. The meat samples were analysed for proximate composition¹ and the data of the experiment were analysed statistically⁷.

RESULTS AND DISCUSSION

From the table it could be observed that the blood glucose, total serum protein concentration were decreased marginally with increasing level of DORB; however, the differences were non-significant ($P>0.05$). Birds maintain their blood glucose level through intestinal absorption. The

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decrease in blood glucose and total serum protein concentration might be attributed to decreased digestibility and availability of dietary protein to the birds due to increasing crude fibre levels in the broiler diet caused by increasing levels of DORB inclusion². The blood urea concentration decreased marginally with increasing levels of DORB, however, the differences were non-significant ($P>0.05$).

The dressing percentage, eviscerated yield and giblet yield did not differ significantly ($P>0.05$)

among the experimental groups. Findings of the present study are in agreement with the findings of other workers^{4,5,6}.

The moisture, crude protein, ether extract and total ash content in the meat of broilers were comparable among the different treatment groups. Non-significant ($P>0.05$) difference in the moisture, crude protein and ether extract content in the broiler meat that were fed on diets containing 20, 40 and 60 percent DORB from 0-56 days was reported by other workers³.

Table 1. Effect of dietary de-oiled rice bran on the performance and carcass characteristics of broilers

Parameter	0%	20%	40%	60%	Significance
Performance parameters					
Initial body weight (g)	100.00	100.00	100.00	100.00	NS
Final body weight (g)	1500.00	1500.00	1500.00	1500.00	NS
Weight gain (g)	1400.00	1400.00	1400.00	1400.00	NS
Feed intake (g)	1000.00	1000.00	1000.00	1000.00	NS
Feed conversion ratio	0.71	0.71	0.71	0.71	NS
Carcass characteristics					
Eviscerated yield (%)	75.00	75.00	75.00	75.00	NS
Dressing percentage (%)	75.00	75.00	75.00	75.00	NS
Meat yield (%)	75.00	75.00	75.00	75.00	NS
Chemical composition of meat					
Moisture (%)	75.00	75.00	75.00	75.00	NS
Crude protein (%)	20.00	20.00	20.00	20.00	NS
Crude fibre (%)	2.00	2.00	2.00	2.00	NS
Crude fat (%)	10.00	10.00	10.00	10.00	NS

CONCLUSION

From the present study it could be concluded that that DORB inclusion upto 20 level

in the diet does not have any significant effect on the blood constituents and carcass characteristics of broilers.

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