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ORIGINAL ARTICLE

PERFORMANCE OF VANARAJA BIRDS WITH PROBIOTICS SUPPLEMENTATION AT ZUNHEBOTO UNDER NAGALAND CONDITION

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Abstract:

Probiotics being live microbial feed supplement and affecting the host animal by improving its intestinal microbial balance has been used as an alternative tool for helping newly hatched chicks to colonize normal microflora as conventionally hatched chicks do Fuller et al. (1989). Antibiotics which have several negative effects have been replaced by probiotics for controlling pathogenic bacteria. Fuller et al., (1989). Development of different products used as food additives such as enzymes, probiotics, organic acids, plant extracts and also supplements improving food flavor and palatability.

KEY WORDS:

microbial feed , organic acids , probiotics , iso-nitrogeneous .

INTRODUCTION

Studies conducted by various works showed that probiotics had a positive effects on chicken performance – growth and feed efficiency (Ahmad, 2006; Mountzouris et al., 2007; Abazza et al., 2008; Midilli et al., 2008) and on health and immune response (Audisio et al., 2000; Koenen et al.,2002; Griggs and Jacob, 2005; Chichlowski et al., 2007; Demeterova et al., 2008).Keeping in view all these beneficial effects of probiotics ,the present study was carried out to know the effect of probiotics supplementation on performance and economics of Vanaraja birds under Nagaland condition.

MATERIALS AND METHODS

A total of 100 Vanaraja birds at the age of one day were procured from ICAR complex Jharnapani. The birds were weighed and then placed in the brooder maintained at the required temperature. The Chicks were housed in four tier electric brooder and were offered basal diet. The two diets were iso-nitrogeneous and iso-caloric containing 22% CP and 2800 kcal ME/kg feed as per B.I.S. The chicks in the group 1 (T1) served as control was offered with just basal diet; however, the chicks in group 2 (T2) was also offered basal diet supplemented with Livozyme @ 10 ml/day/100birds. Feed and water were offered ad libitum throughout the experimental period. Weekly growth rate, daily consumption in each group were recorded, weight gain and feed conversion efficiency were calculated.

Feed samples were analyzed for proximate principles as per A.O.A.C.1 and the gross energy content was estimated by using Bomb Calorimeter and metabolizable energy (ME) were calculated using standard values. The performance index (PI) was calculated as reported earlier. The performance of the birds was measured in terms of body weight, weight gain, feed intake, feed conversion ratio and economics of feeding Livozyme. The data's were analyzed by using SPSS software 16.

Title: PERFORMANCE OF VANARAJA BIRDS WITH PROBIOTICS SUPPLEMENTATION AT ZUNHEBOTO UNDER NAGALAND CONDITIONAUSTION, DEPERSONALIZATION AND PERSONAL ACCOMPLISHMENT IN DIFFERENT AGE GROUPS OF SCHOOL TEACHERS Source: Review of Research [2249-894X] R.K.CHAURASIA AND V.K.VIDYARTHI yr:2013 vol:3 iss:1

RESULT AND DISCUSSION

The effect of probiotics supplemention on chickens live weight and weight is presented in Table 1. The birds from the group receiving probiotics had significantly ($P<0.01$) higher live weight and weight gain compared with those from the control group. These results are in agreement with other research studies with chickens fed on probiotics by other workers Mountzouris et al. (2007), Samli et al. (2007), Abaza et al. (2008).

The total feed intake was 1350 gms and 1600.25 gms which was significantly($P<0.01$) higher for Vanaraja chickens fed with probiotics supplemented diet than for those fed the basal diet without additive .The FCR of the birds were 2.15 and 1.98 for control and probiotics groups. The superior FCE of Vanaraja chicks were reflected in superior body weight. These were in lines with those of earlier workers kumara et al.(2001), Sharma et al.(2004), Chaurasia et al.(2008) and Vidyarthi et al.(2010).

Table 1.Overall performance of vanaraja bird with probiotic supplemented feed (0-5 weeks)

Particulars	Control	Treatment (Probiotics)
Average live body weight at 5 weeks(g/bird)	$625.84^{A} \pm 90.38$	$806.85^{B} \pm 119.12$
Average gain in body weight(g/wk/bird)	$84.07^{A} \pm 16.46$	$109.91^{B} \pm 25.92$
Total feed intake(g/bird)	$1350.25^{a} \pm 30.74$	$1600.25^{b} \pm 57.00$
Feed Conversion Ratio	2.15	1.98
Mortality (%)	6	3
Livability	94	97
Cost of feed (Rs./kg)	20.25	22.75
Feed cost (Rs./kg BW)	43.74 ± 0.99	45.16 ± 1.60
Cost of production (Rs./kg BW)	63.75 ± 0.99	65.16 ± 1.60
Net profit (Rs./kg BW)	$17.69^{A} \pm 3.88$	$38.90^{B} \pm 3.65$

A ,B superscripts in a row differ significantly ($P<0.05$)
a ,b superscripts in a row differ significantly ($P<0.01$)

Datas on mortality showed that in the control group there was 6% as compared to probiotics fed group of 3% only. These results were well corroborated with the findings of other workers Hosamani et al.(2004), Sharma et al.(2004) and Chaurasia et al.(2008) who had also reported decreased mortality rate in probiotics feed supplemented group. The cost of feeding varied marginally due to the cost of feed supplement and its usage level. (i.e Rs.20.25 vs. Rs.22.75).The feed cost per kg body weight was lowest in control group and high in treatment group. The cost of production was higher in treatment group however, the net profit (Rs. 38.90 per kg body weight) was significantly higher ($P<0.05$) in probiotics fed group than control group (Rs. 17.69 per kg body weight).

It was concluded that supplementation with Livozyme @10 ml/100/birds extended beneficial effects on growth, weight gain, FCR and net profit in Vanaraja birds Santosh et al.(2005).

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