

## Effect of feed supplement on the performance of commercial broiler

■ I.U. SHEIKH

Author for correspondence :

I.U. SHEIKH

Department of Animal Husbandry  
and Dairying, SOPORE (J&K)  
INDIA

**Abstract :** The effect of liquid feed supplementation on the performance of commercial broiler has been studied for a period of six weeks. The average bodyweight at six weeks for different groups were found to be  $1.52 \pm 0.07$ ,  $1.57 \pm 0.08$  and  $1.56 \pm 0.08$  kg. for  $T_0$ ,  $T_1$  and  $T_2$  groups, respectively. The groups treated with feed additives through drinking water has increased body weight significantly ( $P < 0.05$ ) than the control group. The feed conversion efficiency was also found to be significantly better ( $P < 0.05$ ) in the groups treated with liquid feed supplement in comparison to control groups resulting less cost of production. The cost of production per kg live broiler was found to be 4.70 and 3.78 per cent lower in treated groups than control group. Better livability per cent was found in the groups treated with additive than the control group. The performance index was also found to be better in feed supplemented groups.

**Key words :** Feed supplement, Broiler, Performance

**How to cite this paper :** Sheikh, I.U. (2012). Effect of feed supplement on the performance of commercial broiler, *Vet. Sci. Res. J.*, 3(1 & 2) : 4 - 6.

**Paper history :** Received : 03.08.2012; Revised : 13.09.2012; Accepted : 20.09.2012

Email: iusheikh@rediffmail.com

### INTRODUCTION

The cost of feed alone is worked out to be 70-80 % of the total cost of poultry production. There is also a competition with the human being for cereal grains which often force the nutritionist to formulate cheaper diets. Non availability of quality feed especially protein sources and its cost is a major constraint for poultry production. The cost of production per kg live broiler is higher in Kashmir valley than other parts of the country because the feed has to be brought from other states of the country. The cost of per kg live broiler ranges from Rs. 60-80. Feed additives are generally used to improve appetite, as production enhancer and also as antistress. Feed additive increases the efficiency of feed utilization, growth and improved survivability in broilers (Narayanswami *et al.*, 2003). Herbal liver tonics supplemented in broiler diets may serve as effective growth promoters and help in better weight gain in broiler chicks (Ramappa and Devegowda, 1975). Without addition of feed additives full benefits of the nutrients present in the diets may not be obtained. Therefore, the present study has been carried out to investigate the effects of feed

supplement *viz.*, liv-100 on the performance of commercial broilers up to six weeks of age.

### RESEARCH METHODOLOGY

The present study was conducted in a private farm near Faculty of Agriculture, Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, Wadura during 2007. A total of 360 commercial day old broiler chicks having identical body weights ( $40 \pm 5$  g) were divided into three groups having 120 chicks in each. Group-I was kept as control ( $T_0$ ) without providing any feed additives and Group-II ( $T_1$ ) and Group-III ( $T_2$ ) were provided with Liv-100 (liver stimulant) @ 20ml and 30ml per 100 birds daily, respectively, through drinking water which is a herbal product of AROSOL Pharmaceuticals Ltd. indicated for fighting aflatoxin, restores reduced feed intake, improve liver function, better feed conversion efficiency, faster growth, livability and production and helps better utilization of nutrients. The birds from all the groups were fed standard commercial broiler ration *ad libitum* containing 21% CP and 2900 kcal ME/kg diet up to six weeks of

age. The birds were reared under deep litter systems of management following standard managerial practices. The same treatment was repeated for another two consecutive batches. Data on weekly body weights of 50 birds from each group was recorded randomly on all the birds at six weeks. Feed consumption, mortality etc. was recorded. Feed Conversion efficiency and cost of production per kg live weight was calculated by adopting the formula (Narahari, 1996). Performance index was calculated as per the formula described by Pande (1998). The data were subjected to statistical analysis as per the method of Snedecor and Cochran (1967).

## RESULTS AND DISCUSSION

The overall mean body weight at day old and six week, feed conversion efficiency, cumulative feed consumption has been presented in Table 1. The average bodyweights of broiler at the end of six weeks was recorded to be  $1.52 \pm 0.07$ ,  $1.57 \pm 0.08$ ,  $1.56 \pm 0.08$  kg for T<sub>0</sub>, T<sub>1</sub> and T<sub>2</sub> groups, respectively. The groups treated with feed additives through drinking water have increased body weight markedly than the control group. The growth of T<sub>2</sub> group was marginally better than T<sub>1</sub> group. T<sub>2</sub> group showed significantly better body weight (P<0.05) than control group at the end of six weeks. However, no significant

differences were observed between T<sub>1</sub> and T<sub>2</sub> groups. Narayanswami *et al.* (2003) also reported increased bodyweight due to feed additive incorporation. The cumulative feed consumption was lower in the groups treated with liquid feed supplement in comparison to control groups and thus resulting significantly better feed conversion efficiency (P<0.05) and thereby reduce the cost of production. Improved feed conversion efficiency in broilers due to supplementation of feed additive was reported by Bhagawat *et al.* (1999) and Baruah and Bhat (2006). The livability was also recorded to be better in treated groups than control. The cost of production per kg live broiler was calculated out to be Rs. 48.12, 45.86 and 46.30 respectively, for T<sub>0</sub>, T<sub>1</sub> and T<sub>2</sub> groups. The cost of production per kg live weight in feed supplemented groups was lower than the control group and improvement in cost of production per kg live broiler over control was 4.70 and 3.78 per cent for T<sub>1</sub> and T<sub>2</sub> groups, respectively. The lower cost of production per kg live broiler in feed supplemented group might be due to better feed conversion efficiency shown by that group. Baruah and Bhat (2006) and Tamilvanan *et al.* (2003) also reported that there was an improvement of cost of production due to supplement of feed additives. The performance index was found to be 151.53, 168.59 and 165.54 for T<sub>0</sub>, T<sub>1</sub> and T<sub>2</sub> groups, respectively.

**Table 1 : Performance of broiler fed with feed supplements ( Liv-100)**

Parameters	Treatment groups		
	T <sub>0</sub>	T <sub>1</sub>	T <sub>2</sub>
Initial bodyweight (g)	40.2± 5	40.5± 5	40.6± 5
Final body weight (kg)	1.52± 0.07	1.57*±0.08	1.56*±0.08
Livability (%)	94.21	95.56	95.82
Performance index (PI)	151.53	168.49	165.54
Improvement over control (%)	Nil	16.96	14.01
Feed intake (kg)	3.42	3.33	3.35
Feed conversion efficiency	2.26	2.12*	2.15*
Chick cost (Rs.)	17.00	17.00	17.00
Chick cost factor (Rs) (A) = 0.6 x cost of day old chicks	10.20	10.20	10.20
Feed cost factor (B) = F.C.E x cost of 1 kg feed	31.64	29.68	30.10
Miscellaneous expenditure ( C ) = Add 15% Of (A+B)	6.28	5.98	6.00
Production cost per kg live broiler = A+B+C	48.12	45.86	46.30
(%) Improvement of cost of production /kg over control	0.00	4.70	3.78

\* indicates significance of value at P=0.05

$$\text{Performance index (PI)} = \frac{\text{Average body weight (g)} \times \% \text{ livability}}{\text{Cumulative feed conversion efficiency} \times \text{No. of days}} \div 10$$

## LITERATURE CITED

- Bagawat, V.G., Mitra, S.K., Suryanarayan, T. and Sachin, A. (1999). The anabolic activity of Liv.52 PROTEC in commercial broiler, *Poultry Adviser*, **32**:27.
- Moloy, S., Baruah and Bhat, B.P. (2006).Effect of feed additives on broiler performance in farming system, *Indian Vet.J.*, **83**(10):84.
- Narahari, D. (1996). *Commercial broiler production*, Emkay Publications, Delhi, 1<sup>st</sup> Ed., pp: 122.
- Narayanswami, H.D., Prakash, Bveeregowa, B.M, Santosh, B. and Bhagawat, V.G. (2003). The effect of Liv.52 PROTEC poultry feed supplement on performance of commercial broilers, *Indian Vet. Med. J.*, **4**(27):367.
- Pande, C.B. (1998). Zigsaw-Enhanced performance under field observations, *Pasudhan*,**13**: 4
- Ramappa, B.S. and Devegowda, G.(1975).Effect of feeding Liv.52 on the growth and feed consumption of broiler chickens, *Indian Vet. J.*, **2**:115.
- Snedecor, G.W. and Cochran, W.G. (1967). *Statistical methods.*, 6<sup>th</sup> Ed., Oxford And IBH Publishing Company, Calcutta.
- Tamilvanan, T., Thiagarajan, M., Ramesh, V. and Sivkumar (2003).Economics of broiler chicken under different systems of management fed with processed feed and probiotics, *Indian Vet. J.*, **80**: 1265.

\*\*\*\*\*