



Feeding maize plus booster ration *vis-a-vis* readymade feed in broiler chicken

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Abstract

Maize is one of the major ingredients of poultry feed and being a major *Kharif* crop in H.P., it is readily available in the area. But majority of the broiler poultry farmers in the region are using readymade feed. In the present study, the cost of feeding broilers was studied where in one group was fed weighed quantity of starter and finisher ration from 8-21 and 22-40 days of age respectively while the second group was fed grounded local maize plus booster ration in the ratio of 50:50 from 8-21 days and 60:40 from 22-40 days of age. Results revealed that the feed conversion ratio and weight gain was comparable among two groups but the cost of feeding per broiler was Rs 113.27 in readymade feed fed group while it was only Rs 99.75 in maize plus booster ration fed group. Thus, it may be concluded that feeding of maize plus booster ration to broiler chicks effectively reduced the cost of feeding per broiler and increase return per bird without any untoward impact on broiler performance.

Key words: Broiler, maize, booster and readymade feed.

Introduction

Broiler poultry farming is an emerging enterprise in Himachal Pradesh. Most of the poultry farmers are feeding readymade poultry feed to their chickens. Some poultry rearers are feeding poultry booster plus maize but they are also using it only after 28 days of age or in the finisher phase. Maize is the most preferred energy source in poultry diets and is one of the major components of poultry feed (Sharma *et al.*, 2008). Maize is also the major *Kharif* crop in

H.P. and is readily available in the area but only a small fraction of maize produce is used either for human consumption or animal feeding and bulk of the maize produce is sold by the farmers to wholesalers. Escalated cost of ready made broiler feed due to procurement and transportation from nearby states is one of the major impediments in sizable growth of broiler farming in the region compared to other parts of country. The state is generally classified as slow growing northern state with respect to poultry growth (Bhardwaj and Kumar, 2005), owing to variety of

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factors including the feed cost. Therefore the present study was performed to assess the cost of broiler production by feeding ready-made broiler feed vis-a-vis maize plus booster ration.

Materials and Methods

200 commercial broiler chicks (VenCobb-400) were procured and reared in deep litter under standard management conditions. All the chicks were provided pre-starter ration upto 7 days of age. On 8th day all the birds were weighed individually and divided into two groups. The first group was offered weighed quantity of starter and finisher ration from 8-21 and 22-40 days of age respectively. While the second group was fed grounded local maize and booster ration in the ratio of 50:50 from 8-21 days and 60:40 from 22-40 days of age. 20 percent representative birds from both groups were weighed on 22nd day while all birds were weighed on 40th day. The broiler pre-starter, starter and finisher feed were purchased at Rs 31.0, Rs 30.5 and Rs 30/kg respectively while maize was purchased locally @ Rs 14/kg and grinded @ 1/kg. The broiler booster feed was purchased at Rs 40/kg. The maize and booster feed samples were analysed for crude protein content and contains 12 and 34 per cent protein, respectively. The data generated was analysed using Generalized Linear Model (GLM) using Statistical Analysis Software (SAS) version 9.2.

Results and Discussion

Broiler performance: The feed consumed per broiler during pre-starter (0-7 d) phase was 177 g. During starter phase feed consumed per broiler was 1.02 and 1.01 kg for birds fed commercially available starter feed and grinded maize plus booster (1:1), respectively (Table 1). Similarly in the finisher phase the feed intake per broiler was 2.58 and 2.69 kg, respectively.

The average body weight of birds on 22nd and 40th day of age was 0.83 kg and 2.2 kg for birds fed readymade ration while it was 0.84 kg and 2.18 kg for birds consuming maize plus booster indicating no significant variation in body weight (Table 2). Similarly the feed conversion ratio (FCR) between the two treatments was also comparable for both starter phase and finisher phase.

For optimal performance in broiler chickens BIS (2007) recommends a crude protein level of 22 and 20 per cent during starter (8-21d) and finisher (22-40 d) phase, respectively. In the present trial feeding a mix of maize and booster ration in equal proportions during starter phase resulted in a feed mix containing 23 per cent protein while mixing in 60:40 ratio during finisher phase resulted in a ration containing 20.8 per cent protein which is more than the BIS(2007) recommended levels for feeding during respective phases. The performance of broilers observed in the experiment in terms of weight gain and FCR is very close to BIS 2007 and the standards reported by private companies like Venky's which supplies the Vencobb-400 chicks indicating that feeding of maize plus booster ratio w.e.f. starter phase itself has no untoward impact on broiler performance.

Additionally the Shank colour of birds in group fed maize plus booster was distinctly more yellow compared to the birds which consumed readymade ration. The local maize used in the present experiment was fanta colored indicating high xanthophylls contents and feeding of maize plus booster ration led to deposition of pigment in broiler's shanks making them more appealing to the consumers.

Cost of feeding: The cost of feed consumed per bird, was less both during starter and finisher phase for group which consumed maize plus booster compared to the group which consumed readymade starter and finisher ration. The overall cost of feed consumed per bird was Rs 113.3 for birds which consumed readymade feed while it was only Rs 99.7 for birds

Table 1. Per bird feed intake and weight gain (kg) in different phases

	Feed intake			Weight gain		
	Starter	Finisher	Cumulative	Starter	Finisher	Overall
	(8-21 d)	(22-40 d)	(0-40 d)	(8-21 d)	(22-40 d)	(0-40 d)
Group 1 Readymade feed	1.02	2.58	3.77	0.65	1.32	2.11
Group 2 Booster+ Maize	1.01	2.69	3.89	0.66	1.33	2.13

fed maize plus booster indicating use of local maize plus booster reduced the cost of broiler production by about 12% compared to feeding readymade starter and finisher ration (Table 3).

Expenditure on feed constitutes about 70 per cent of cost of broiler production and to reduce the cost of broiler production some existing poultry farmers in the area are already using broiler booster/concentrate plus maize from about 28 days onwards. A poultry company like Venky's is also

recommending use of broiler concentrate and maize in the ratio of 40:60 in the finisher phase in areas where maize is readily available. As most of the farmers are traditionally involved in cereal productions, the surplus maize available in the region can be effectively utilized by local poultry growers by mixing with booster ration, thereby making broiler feeding more cost effective and broiler rearing economically more remunerative. The results of this trial clearly indicated that by feeding maize plus

Table 2. Average body weights of broiler chicks at different phases

	Average body weight (Mean±S.D)			
	Day 1(g)	Day 8(g)	Day 22(kg)	Day 40(kg)
Group 1 Readymade feed	40±1.9	181±8.9	0.83±0.08	2.19±0.08
Group 2 Booster + Maize			0.84±0.09	2.18±0.13

Table 3. Feed conversion ratio and cost of feed consumed per broiler across different phases

	Feed conversion ratio			Cost of feed consumed per bird (Rs)		
	Starter	Finisher	Overall	Starter	Finisher	Overall
	(8-21 d)	(22-40 d)	(0-40 d)	(8-21 d)	(22-40 d)	(0-40 d)
Group 1 Readymade feed	1.54	1.94	1.81	30.34	77.44	113.27
Group 2 Booster+ Maize	1.5	2.02	1.85	27.13	67.13	99.75

booster from 8th day onwards the cost of feeding per bird can be further reduced without affecting the broiler performance.

Therefore, it can be concluded that by feeding maize plus booster ration to broiler chicks

from starter phase, farmers can effectively reduce the cost of broiler production and increase return per bird without any adverse effect on broiler performance.

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