

## RESEARCH PAPER

# Procurement management of input and factors influencing commercial broiler rearing in Dharwad district

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### ABSTRACT

Poultry farming in India has been a huge success in the last decade. Statistics showed a 2 per cent increase per annum in the agricultural production during the last 30 years, while the growth in the poultry sector has been 12 per cent which gives an idea about how well this industry is doing. The Indian poultry industry has grown largely due to the initiative of private enterprises. Poultry farming in India is a culmination of many years of innovation. Moreover, today the industry as a whole, with its enabling of low cost model with increased productivity. The procurement cost increases as the net income also increases. There are a total of 15 factors relating to production, marketing, socio-economic characters, contracting terms which were considered and subjected to principal component analysis. In this principal component analysis, six dimensions were extracted and considered for interpretation.

**KEY WORDS :** Factor analysis, Procurement, Commercial broiler

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The present research study was conducted on procurement management of input and factors influencing commercial broiler rearing in Dharwad district. Livestock production is the world's largest user of land, either directly through grazing or indirectly through consumption of fodder and feed grains. Globally, livestock production currently accounts for 40 per cent of the gross value of agricultural production. In industrial countries this

share is more than half of. In developing countries, where it accounts for one-third, its share is rising quickly; livestock production is increasing rapidly as a result of growth in population, incomes and changes in lifestyles and dietary habits.

Indian poultry industry is booming and is emerging as the world's 2nd largest market. The poultry industry is growing at a rapid growth rate of 12-15 per cent per year on the back of the intelligent use of modern technology and all this while maintaining some of the world's lowest production costs. In spite of global melt down the poultry industry in India is growing and will continue to grow as the billion, odd population has just begin relishing the taste and importance of nutritional value of chicken and eggs. Poultry in India has emerged as a promising platform for poultry farmer from neighbouring countries like Pakistan, Bangladesh, Sri Lanka and Nepal. Rather the entire poultry industry from Indian Sub-continent, Middle East and Africa are looking forward to poultry in India.

Hyderabad known as poultry capital of India is in the

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state of Andhra Pradesh which boasts of highest poultry production in the country, is well connected to outside world. Indian poultry industry is one of the fastest growing segments of the agricultural sector today in India. The production of agricultural crops has been rising at the rate of 1.5 to 2 per cent per annum, while the production of eggs and broilers has been rising at a rate of 8 to 10 per cent per annum. Today India is world's fifth largest egg producer and the eighteenth largest producer of broilers. Driving this kind of expansion, the contributing factors are - growth in per capita income, a growing urban population and falling poultry prices. The Indian poultry industry has undergone a paradigm shift in structure and operation. A very significant feature of India's poultry industry is its transformation from a mere backyard activity into a major commercial activity in just about four decades, which seems to be really fast.

## METHODOLOGY

Both primary and secondary informations were collected and used in the study. Primary data were collected with the help of well-structured and pre-tested schedule. In Dharwad district two talukas were selected namely Kalaghatgi and Dharwad talukas. All broiler farms from these talukas were post enumeration classified into three categories *viz.*, small (<5000 birds), medium (5000 to 10000 birds) and large (>10000 birds) and the secondary data were collected from District Statistical Department and Animal Husbandry Department in the year 2013-14.

The present study was conducted in Dharwad district and this district is congenial to poultry farms in all aspects especially with respect to climatic variability, production and marketing infrastructure. Dharwad district was selected since the regional hatchery office and poultry training centre are present in Dharwad district. In Dharwad district Kalaghatgi and Dharwad talukas were selected based on concentration

of broiler farms. From each taluka 15 broiler farms, 3 wholesalers and 15 retailers were selected through purposive sampling. Thus, the total sample size of respondents was 66. The data were collected through personal interviews from the commercial broiler rearing farmers, wholesalers and retailers with the help of well-structured pre-tested schedule by survey methods. The information gathered was on production, procurement and input cost, marketing channels, factors influencing commercial broilers and problems of commercial broiler rearing, during 2013-14.

## ANALYSIS AND DISCUSSION

The broiler farmers procured inputs through various intermediaries (Table 1). The sources identified were poultry dealers, integrators (contracting firms), wholesaler, poultry feed unit and the local market. About 26.67 per cent of farmers procured day old chicks from poultry dealers and 73.33 per cent of farmers procured from hatcheries. In case of feeds, about 33.33 per cent procured the feeds from poultry feed unit, 50 per cent farmers procured from wholesalers, similarly in case of 16.67 per cent, procured from local market. But medicines and vaccines were maximum (60 %) which was procured from local market and nearly 40 per cent chosen from poultry dealers. Litter materials procurement was maximum (83.33 %) which were procured from local market and remaining 16.67 per cent was procured from poultry dealers. In commercial broiler business, the major inputs are the feed, day old chicks, litter material and medicines. Hence, the farmers incurred cost on input and procured by the farmers themselves. Table 1 revealed the sources of input procurement by broiler rearing farmers.

The total values of input procurement by broiler producing farmer are presented in Table 2, which revealed that the different values of input procurement per year, per batch and per bird. Among various inputs Rs. 2.51 lakhs per

Sr. No.	Inputs	Particulars	Number of farms
1.	Day old chicks	Poultry dealer	08 (26.67)
		Hatcheries	22 (73.33)
		Total	30 (100.00)
2.	Feed	Poultry feed unit	10 (33.33)
		Wholesaler	15 (50.00)
		Local market	05 (16.67)
		Total	30 (100.00)
3.	Medicine and vaccines	Poultry dealer	12 (40.00)
		Local market	18 (60.00)
		Total	30 (100.00)
4.	Litter materials	Poultry dealer	05 (16.67)
		Local market	25 (83.33)
		Total	30 (100.00)

year, Rs. 0.62 lakhs per batch and Rs. 19.85 per bird were spent on day old chick procurement by small farms, Rs.6.56 lakhs per year, Rs.1.64 lakhs per batch and Rs. 19.9 per bird by medium farms and Rs. 10.22 lakhs per year, Rs. 2.55 per batch and Rs. 19.70 per bird by large farmers. Feed procurement cost by small farms was Rs. 9.30 lakhs per year, Rs. 2.06 lakhs per batch and Rs. 65.58 per bird. In case of medium farms Rs. 25.43 lakhs per year, Rs. 5.29 lakhs per batch and Rs. 64.23 per bird and the large farmers procured feed was maximum Rs. 35.22 lakhs per year, Rs. 8.19 lakhs per batch and Rs. 63.16 per

bird. The procurement of medicine cost per year spent was Rs. 0.09 lakhs per year, Rs. 0.022 per batch and Rs. 0.69 per bird in small farms, but in case of large farms amount spent was maximum.

The important and distinguished point that should take note of it is the way of procurement of inputs, which comes to the farmers through different avenues and channels. From the study it could be clearly inferred that the total value of procurement of input was higher in case of large farms when compared to small and medium farms. This may be based on

**Table 2 : Total cost of inputs procured by commercial broiler farms (n=30)**

Sr. No.	Inputs	Per year (Rs. in lakhs)			Per batch (Rs. in lakhs)			Per bird (Rupees)		
		Small farms	Medium farms	Large farms	Small farms	Medium farms	Large farms	Small farms	Medium farms	Large farms
1.	Day old chicks	2.51	6.56	10.22	0.62	1.64	2.55	19.85	19.9	19.70
2.	Feed	9.30	25.43	35.22	2.06	5.29	8.19	65.58	64.23	63.16
3.	Medicine and vaccines	0.09	0.03	0.47	0.02	0.07	0.11	0.69	0.87	0.92
4.	Litter materials	0.09	0.02	0.37	0.02	0.06	0.09	0.71	0.73	0.71

**Table 3 : Variables with relatively higher factor loadings in different dimensions on the commercial broilers**

First dimension variables (I-PC)		
Codes		Factor loadings
F <sub>9</sub>	Technical guidance	0.774
F <sub>3</sub>	Education level	0.761
F <sub>10</sub>	Buy back agreement	0.614
	Percentage variation	13.256
Second dimension variable (II – PC)		
Codes		Factor loadings
F <sub>4</sub>	Land holding	0.798
F <sub>13</sub>	Festival season	0.788
	Percentage variation	12.469
Third dimensions variables (III - PC)		
Code		Factor loadings
F <sub>7</sub>	Improved access to the market	0.808
	Percentage variation	12.385
Fourth dimension variables (IV-PC)		
Codes		Factor loadings
F <sub>8</sub>	Timely availability of critical inputs	0.657
F <sub>15</sub>	Skilled / Trained labor	0.853
	Percentage variation	11.811
Fifth dimension variables (V-PC)		
Codes		Factor loadings
F <sub>1</sub>	Age of the farmer	0.722
F <sub>11</sub>	Transport facility	0.782
	Percentage variation	10.598
Sixth dimension variables (VI-PC)		
Code		Factor loadings
F <sub>5</sub>	Favourable contracting terms	0.687
	Percentage variation	10.290

the number of birds and size of farms increases as the net income also increases. These findings are in conformity with Singh and Murthy (2012).

The technique of principal component analysis was employed for studying the factors that influenced the management of commercial broiler. Varimax rotation method was used and separate analysis was done. The factors which influenced the management of commercial broilers were considered. There were a total of 15 factors relating to production, marketing, socio-economic characters, contracting terms which were considered and principal component analysis was done.

First dimension included the variables such as buy back agreement, education level and technical guidance, which had accounted for 13.256 per cent. This clearly indicated that these variables were largely responsible for broiler rearing. Also, this was clearly indicated by the principle component analysis technique where in the variables had been captured in the first dimension itself indicating their prime importance. As this dimension explains higher variation than any other, it can be termed as prime dimension. The second dimension was able to explain 12.469 per cent of variation and captured two variables namely, land holding and festival season. These were considered as the next best factors influencing the farmers for a broiler rearing. The third dimension captured the only one variable *i.e.*, improved access to the market accounting for 12.385 per cent in influencing the broiler farmers. This variable was considered as the next best factors after the designated factors. The fourth dimension was able to explain 11.811 per cent of variation and captured two variables namely, timely availability of critical inputs and skilled/trained labour. These were considered as the best variables in this dimension influencing the farmers rearing. The fifth dimension was able to explain 10.598 per cent of variation and captured two variables namely, age of the farmer and transport facility. These were considered as the best variables in this dimension influencing the farmers to previous four dimensions. Sixth dimension captured a single variable namely, the favourable contracting terms, which had reasonable influence on farmers to go in for a poultry contract. This variable was considered in this dimension after accounting to all previous dimensions.

In this principal component analysis, six dimensions were extracted and considered for interpretation. The variance explained in absolute values registered a decreasing trend from first dimension to all other succeeding dimensions. It can be seen from Table 3 that the percentage variation was 13.256 in first dimension, which decreased at 10.290 in the six dimensions. All the five dimensions extracted together

explained 70.809 per cent. A factor influencing the management of commercial broiler forms in poultry production and extracted dimensions of principal components and the factor loadings for different factors. These findings are in conformity with Ike and Oboh (2011). Aho (1998), Biswas *et al.* (2003) and Lukic (2011) have also contributed some information related to the present investigation.

### Conclusion :

The total value of procurement of input was higher in case of large farms when compared to small and medium farms. This may be based on the number of birds and size of farms. The procurement cost increases as the net income also increases. There are a total of 15 factors relating to production, marketing, socio-economic characters, contracting terms which were considered and subjected to principal component analysis. Six dimensions were extracted and considered for interpretation. The variance explained in absolute values registered a decreasing trend from first dimension to all other succeeding dimensions.

### REFERENCES

- Bhingaree, R.T., Naik, V.G., Talathi, J.M. and Malave, D. B. (2011). Economics of procurement and disposal of cane in Konkan Region, *Internat. J. Forest Usufructs Mgmt.*, **12**(1) : 86-94.
- Biswas, S., Goswami, A., Jana, C. and Das, A.K. (2003). A study on broiler chicken production and marketing situation in coastal belt of West Bengal. *Indian J. Anim. Health*, **42**(1): 51-57.
- Eihvalde, I., Kairisa, D. and Zagorska, J. (2012). Analysis of factors influencing immunoglobulin concentration in colostrum of dairy cows. University of Agriculture, Jelgava, *Latvia*. **2**(57): 256-259.
- Ike, P.C. and Oboh, V.U. (2011). Socio-economic factors influencing the choice of type of broiler enterprise among poultry farmers in Delta State Nigeria. *J. Agric. Food Sci.*, **8**(2): 81-90.
- Lukic (2011). Adequate calcium nutrition and quality of egg shell and bones in layers - innovative approach. *Biotechnol. Anim. Husbandry*, **27**(1) : 485-497.
- Singh, Anil and Murthy C. (2012). Procurement management of slaughter animals by retailers in Madhya Pradesh. *Internat. J. Comm. Business Mgmt.*, **5**(2) : 122-127.
- Singh, V.P., Sharma, V.K., Sidhu, M.S. and Kingra, H.S. (2010). Broiler production in Punjab – An economic Analysis. *Agric. Econ. Res. Rev.*, **23**(3) : 315-324.
- Tian, Yi Shui (2013). Logistics of biomass feedstock: the key to biofuel production. *Biofuels*, **4**(1) : 9-11.

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