Economic Analysis of Broiler Production in Balaghat District of Madhya Pradesh

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Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur

In partial fulfilment of the requirements for the degree of

MASTER OF SCIENCE

In

AGRICULTURE

(AGRICULTURAL ECONOMICS AND FARM MANAGEMENT)

By

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2015

CERTIFICATE - I

This is to certify that the thesis entitled ***"An Economic Analysis of Broilers Production in Balaghat District of Madhya Pradesh"*** *submitted in partial fulfillment of the requirements for the degree of Master of Science in* ***Agricultural Economics and Farm Management*** *of Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur (M.P.) is a record of the bonafide research work carried out by* ***Pritee Dongre*** *under my guidance and supervision. The subject of the thesis has been approved the Student's Advisory Committee and Direction of Instruction.*

All the assistance and help received during the course of the investigation has been acknowledged by her.

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(Dr. A.K. Sarawgi)
Chairman of the Advisory Committee

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CERTIFICATE - II

This is to certify that the thesis entitled ***"An Economic Analysis of Broilers Production in Balaghat District of Madhya Pradesh"*** *submitted by* ***Pritee Dongre*** *to the Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur in partial fulfillment of the requirements for the degree of* ***Master of Science in Agricultural Economics and Farm Management****, has been after evaluation, approved by the External Examiner and by the Student's Advisory Committee after an oral examination of the same.*

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Director of Instructions: **Dr. G.S. Rajput** ……..

Declaration and Undertaking by the Candidate

I, Pritee Dongre D/o Shri Lal Chand Dongre Certify the work embodied in thesis entitled “An economic analysis of Broilers Production in Balaghat District of Madhya Pradesh” is my own first hand bonafide work carried out by me under the guidance of Dr. A. K. Sarawgi at Department of Agricultural Economics and Farm Management, College of Agriculture, Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur and place during 2014-2015.

The matter embodied in the thesis has not been submitted for the award of any other degree/diploma. Due credit has been made to all the assistance and help.

I, undertake the complete responsibility that any act of misinterpretation, mistakes, errors of fact are entirely of my own.

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I am thankful to the lord almighty for his grace and immense blessings, always showered upon me.

Place: Jabalpur

Date: **(Pritee Dongre)**

CURRICULUM VITAE

The author of this thesis ***Pritee Dongre*** was born on 27th November at District Balaghat of Madhya Pradesh.

She completed Primary education at Balaghat. She passed his high school examination from ***Govt M L B Girls H S School, Balaghat District of Madhya Pradesh*** in the year 2003 after that higher secondary examination from ***Abhinav H S School, Rajegaon, Balaghat District of Madhya Pradesh*** in the year 2005 in Agriculture.

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INTRODUCTION

Poultry is one of the fastest growing segments of the agriculture sector in India today. Indian poultry industry is growing rapidly at a rate of 15-20 percent during last two decade.

In India, poultry sector growth is being driven by rising incomes and a rapidly expanding middle class, together with the emergence of vertically integrated poultry producers that have reduced consumer prices by lowering production and marketing costs. Integrated production, market transition from live birds to chilled and frozen products, and policies that ensure supplies of competitively priced corn and soybeans are keys to future poultry industry growth in India. There are number of small poultry dressing plants in the country. These plants are producing dressed chickens. In addition to these plants, there are five modern integrated poultry processing plants producing dressed chicken, chicken cut parts and other chicken products. These plants will manufacture egg powder and frozen egg-yolk for export.

Total chicks population has registered an annual growth of 7.3 per cent in the last decade. Organized sector accounts for nearly 70 percent of the total poultry output in the country. The current strength of layers and broilers in India is estimated to be 230 million and 2300 million, respectively. Poultry processing has also gone up to 20 per cent of total broiler production. The potential of poultry sector in employment generation and enhancing rural incomes is well-recognized. Over 5 million people are directly or indirectly engaged in poultry sector, apart from numerous small poultry keepers in rural and tribal areas of the country. The domestic broiler meat demand is expected to grow at around 15-18 per cent, while table egg demand is expected to grow at 5-7 per cent in medium to long term.

Chicken, broiler, meat and skin, cooked stewed nutrienal value per 100g. (3.5oz)

Energy	916 kg (219 Kcal)
Carbohydrates	0.00 g
Fat	12.56 g
Protein	24.68 g
Tryptophan	0.276 g
Threonine	1.020 g
Isoleucine	1.233 g
Leucine	1.797 g
Lysine	2.011 g
Methionine	0.657 g
Cystine	0.329 g
Phenylalanine	0.959 g
Tyrosine	0.796 g
Valine	1.199 g
Arginine	1.545 g
Histidine	0.726 g
Alanine	1.436 g
Aspartic acid	2.200 g
Glutamic acid	3.610 g
Glycine	1.583 g
Proline	1.190 g
Serine	0.870 g

Vitamins

Vitamin A	44 ug (6%)
Pantothenic Acid (B5)	

Trace metals

Iron	1.16 mg (9%)
Sodium	67 mg (4%)

Other constituents

Water	63.93 g

No including 35% bone

UNITS

- Ug = micrograms, Mg= Milligrams, Iu = International

SOURCE - USDA Nutrient Database

India is one of the largest producer of poultry meat and eggs in the world. As per FAO statistics, India is the 3rd largest producer of eggs with annual production of 57 billion eggs and 5th largest producer of poultry meat with a production of 2.5 million tonnes of poultry meat (2012-2013) in the world. The current per capita availability of eggs is around 57 eggs per year during 2012-2013. The current per capita consumption of poultry meat is 2.5 kg. Meat production on the other hand has gone up close to four times 10.8 thousand tonnes in 2001-02 to 43 thousand tonnes in 2012-13. Eggs and chicken meat are the cheapest source of animal protein affordable by the masses.

The organized sector of Indian Poultry Industry is contributing nearly 70 per cent of the total output and the rest 30 per cent in the unorganized sector. Broiler industry is well dominated by the southern states in our country with nearly 60-70 per cent total output coming from these states. The layer industry once again is represented more in southern states especially, Andhra Pradesh, Tamil Nadu and Maharashtra producing nearly 70 per cent of the country's egg production. India's 75 per cent of egg produce is consumed by the population of 25 per cent living in urban and semi-urban areas. Presently about 800 hatcheries

are operating in India today.

In Madhya Pradesh higher numbers of poultry birds are found in Jhabua and Alirajpur (together 12.9%), Bhopal (10.4%) and Barwani (8.2%). Between 3-8 percent of the population of poultry birds of the state total are found in Dhar, Indore, Chhindwara, West Nimar, Sidhi, Balaghat, Betul and Jabalpur. Chhindwara, Jhabua and Alirajpur are the key district with significant number of both livestock and number of poultry birds in the state. Thus poultry business is a major source of income and employment in the region. In view of the importance of broiler production and awareness of its economics aspect this study has been undertaken in Balaghat district with following specific objectives.

1. To Know the Present status of broiler production of poultry farm in Balaghat district and Madhya Pradesh.
2. To assess the cost of production of broiler production under selected unit of poultry farms.
3. To measures the marketing cost and margin of broiler production under different marketing channel in the study area.
4. To identify the constraints in broiler production and marketing and to suggest the remedial measures in the study area.

REVIEW OF LITERATURE

Review of literature is an essential part of the thesis. For conceptual clearity and understanding the methodological issue related with the problem under investigation, a systematic review of scientific studies conducted earlier were made under this chapter.

Kumar, V. P. Mahalati, S.(1998**)** to assess the cost and return analysis of 50 broiler farms in Madhya Pradesh which categorised into small (<200 birds) 25, medium (2000-5000 birds)15, and large (>5000 birds)10. Result shows that the major expenditure on all farms was on feed. The total production cost/ 100 broilers for 8 weeks was Rs.3391.97, 3341.08 and 3211.26 for small, medium and large farms, respectively, while the net returns were estimated to be Rs. 165.83, 208.63 and 262.94. The cheaper production cost on the large farms it may be due to bulk buying of materials.

Rajendran, K. Mohan, B. et Al (2008) a detailed study was conducted to determine the economics of broiler farming in commercial broiler farms located in and around Palladam area of Coimbatore district in Tamil Nadu, India. The data were collected by personal interview using a standard pre-tested questionnaire, specially designed for this purpose. A total of 483900 broilers reared in 56 broiler farms representing three farm size, using own, company or both own and company feed, either all-in-all-out or batch system were selected for this study. The cost of production per broiler recorded in the present study was Rs.60.97, 58.69 and 55.97 in small, medium and large farms, respectively. It indicated that the production cost decreased with an increase in farm size. Which might be due to the higher cost of inputs like feed, chicks etc., The reason for comparatively lower production cost of broilers in large sized farms than in small and medium sized farms in the present study could be

attributed to the fact that most of the large sized farms used their own mixed feed and continuously rearing the broilers without break.

Biswas, M. A. A. Akhter, M. M. et Al (2008) a comparative study was conducted on the production performance of different pellet feed for broiler at the marketing age. Nine broiler farms were randomly selected from Sadar Thana of Manikgonj district. The data was collected during January 2005, using the preset questionnaire. Three pellet feeds were used in this study. Among them C.P feed was superior to other two pellet feeds. The FCR of C.P feed was 1.77, the FCR of Aftab feed was 1.87 and the FCR of Saudi-Bangla feed was 1.83. The net profit of C.P feed was higher than the other two feed companies. Sometimes different types of diseases (Colibacillosis, Mycoplasmosis, Salmonellosis, Omphalitis etc) would attack the birds. An increased feed intake followed by faster growth rate to reach a given market weight appeared to be the main advantages of rearing broilers on pelleted diets. The broiler farm owners faced various types of problems like high price of feed, unavailability of day old chicks, outbreak of diseases, inadequate knowledge of poultry feed, fair price of broiler, unavailability of training facilities, irregular supply of electricity and some others social problems.

Horne, P.L.M. van (2009) studied to compares the production costs of broilers in various EU countries in 2007 with those of Brazil, Thailand and the United States. For all these countries, we then look ahead to the year 2012. Developments regarding animal welfare, environmental measures and food safety are charted for each country. The conclusion is that the costs in the Netherlands, Germany and Poland are set to increase in the coming years. As a result of this increase in costs, the difference in production costs compared with Brazil and the United States will increase further.

Ali, M. S. Hossain, M. M.(2010) the study was conducted to determine the selected commercial practices of broiler-producing farmers in Bangladesh, broiler production performance, the relationship between management practices and broiler performance and the problems faced by farmers involved with broiler production. Two hundred and fifty broiler-producing farmers in Modhukhali upazilla constituted the population of the study. One hundred and twenty broiler farmers were randomly selected from this population as the sample. Data were collected under the supervision of researchers with the help of a monitoring schedule and pre-tested interview schedule from December 2007 to June 2008. The majority (78%) of farmers reported low to medium performance in broiler production, and only 22% reported high performance. Education, land possession, annual family income, training exposure, broiler farming experience, broiler farm size, capital in broiler farming and extension contact for farmers all had a significant bearing on performance, while credit needs, problem faced in broiler farming and feed conversion ratio had significant negative relationship with productive performance. On the basis of the 'Problem Faced Index', the high price of broiler feeds ranked first, followed by the cost of chicks, high mortality, low quality feed, cold temperatures (12-15 degrees C) in winter, cost of medication and high rainfall in the rainy season.

Ahmad, H. S. Nahar Singh Pukhta, M. S.(2010) an economic analysis of broiler production in Allahabad district revealed that total cost of broiler production per broiler was found Rs 57.64, 56.45 and 51.37 for small, medium and large farms respectively with weight per broiler of 1.40 kg for small, 1.45 kg for medium and 1.48 kg for large size farms. The farmers having below 500 broilers in their flock were considered as small farmers, those having 500-1000 broilers in their flock were treated as medium farmers and those having above 1000 broilers in their flock size were treated as large poultry farmers. There were six production cycles practiced by poultry farmers in a year, two

each in summer, rainy and winter seasons. Cost of feed alone accounted for more than 60% of the total cost followed by cost of chicks, about 20%. Amount realized by sale of broilers formed the major source of returns (96%) in all the three size groups. The net return per broiler was Rs 9.10, 9.55 and 14.48 for small, medium and large size group farms respectively. Benefit-cost ratio was 1.19:1, 1.20:1 and 1.30:1 for small, medium and large size groups respectively. Net present value (NPV) calculated for small size group was Rs 23, 324.95, 53,080.13 in medium size group and Rs 144, 583.26 in large size group farms. It is concluded that large farms receive higher profits as compared to medium and small size group farms. It is recommended that efforts should be made to exploit this potential.

Singh, V. P. et al., (2010*)* analyzed the cost and return analysis of different sizes of broiler farms in the Punjab state has been carried out based on the primary data collected from 140 broiler farmers for the period March 2008 to February 2009 in three districts, viz. Ludhiana, Hoshiarpur and Muktsar. The study has shown that the total fixed investments per bird have been highest on small farms, followed by medium and large farms. The total variable cost per bird has been reported highest on small farms, followed by medium and large farms. The total cost of meat production per bird has been found highest on small broiler farms, followed by medium and large farms. The net returns per bird over the variable costs have been recorded highest on large farms and economies of scale prevail on these farms. The meat-feed price ratio and benefit-cost ratio have been found to increase with increase in farm-size of broiler farms, which indicates better utilization of inputs on large farms. The study has observed that broiler farming is a profitable venture and has a bright future in the Punjab agriculture for improving economic status of the farming community.

Heidari, M. D. et al., (2011**)** the objective of this study was to determine the energy consumption per 1000 bird for the broiler production in Yazd province, Iran. The data were collected from 44 farms by using a face-to-face questionnaire method during January-February 2010. The collected information was analyzed using descriptive statistics, economic analysis and stochastic frontier production function. The production technology of the farmer was assumed to be specified by the Cobb-Douglas (CD) production function. The sensitivity of energy inputs was estimated using the marginal physical productivity (MPP) method. The MPP value showed the high impact of human labor and machinery energy inputs on output energy. The study revealed that production of meat was profitable in the studied area.

Shaikh A.S. and Zala Y.C. (2011) the production performance of different sizes of broiler farms has been studied by collecting data from 60 broiler producers of Anand district during 2005. To examine production performance, the average feed conversion ratio, livability percentage, average body weight and age at marketing have been worked out. Though broiler production is capital-intensive, it has been found profitable. The average cost of production per broiler has been found to be ` 64 and per kilogram live weight of broiler as ` 32. The variable cost and fixed cost constitute 84.5 per cent and 15.5 per cent of total cost, respectively. The major cost components have been found as feed cost (58.6%), chick cost (21.5%) and depreciation on buildings (10.7%). The net profit per broiler as well as per kilogram body weight has been found as `7.20 and` 3.59, respectively for the sample as a whole. The benefit-cost ratio has worked out to be 1.11 for the sample as a whole and it increases with increase in farm-size, indicating that as farm-size increases, the net margin over the rupee invested on broilers also increases. The break-even analysis has revealed that the producers have to maintain minimum of 1531, 2611 and 10437 broilers, respectively on small, medium and large farms to meet the cost incurred in production of broilers.

Tahir Hameed Bajwa, M.A. et al., (2012) the study was carried out to investigate the effect of housing system on the production of Arbor acres and Hubbard broiler breeder strains and monitor the differences in production potentials on open and controlled housing on deep litter systems, using data collected in 25 broiler breeder farms visited physically situated within Lahore district and data was generated. At Arbor acres and Hubbard breeder farms under controlled (n=12) and open housing systems (n=13) farms (Un-balanced data to minimize error) under each housing system respectively. It was observed that the number of eggs and peak production average was higher at breeder farms under controlled housing system than those managed under open housing system; while feed intake from 0-24 weeks was almost equal under both the housing systems; but relatively higher under controlled housing from 25-64 wk. There was significant ($P<0.05$) difference between groups for 25-64 wk production, initial body weight, number of eggs/bird, peak production averages, feed intake 0-24 weeks and 25-64 weeks. The egg production per hen was however not significantly different from that in open housing.

Ukwuaba, S. I. Inoni, O. E. (2012) resource-use efficiency among small-holder broiler farmers in Oshimili North Local Government Area of Delta State was examined. Primary data collected with structured questionnaire from randomly selected 100 respondents, were analyzed using appropriate statistics. The result revealed that small-holder broiler farming was profitable in the study area. In order to increase output and profitability as well as promote efficient utilization of resources in broiler production. Government should considered as a matter of policy address the intractable problem of lack of access to farm credit by small-holder farmers, provide guaranteed funds at affordable interest rate and capture the significant factors affecting broiler production.

Onubuogu, G. C. (2012) the study focused on factor productivity and efficiency in broiler production in Imo State.

Technical efficiency is synonymous with productivity in resource performance assessment. The main objective of the research was to compare resource use productivity in broiler production looking at the two distinct activities of brooding and selling after four weeks and rearing the brooded to maturity before selling. In order to achieve this, a random sample of 180 broiler farmers of 90 brooders and 90 who rear was taken from the three agricultural zones of the state. A set of structured questionnaire was administered on the farmers. Data obtained were analyzed using simple statistical tools and Additive Multiplicative Dummy Variable Model and t-test statistic. Results showed that farmers who reared their birds to maturity before selling were more technically efficient in the use of production resources; they had higher productivity than their counterparts that just brooded and sold. It is therefore recommended that farmers should brood and rear their broilers to maturity for higher productivity and efficiency.

Anang, B. T. (2013) the study sought to compare the profitability of broiler and layer production in the Brong Ahafo Region of Ghana. Six poultry farms, comprising three layer farms and three broiler farms, were purposively sampled for the study. Data were obtained from production records of the farms and by questionnaire administration. Profitability analysis was carried out using the cost, revenue and profit functions to derive total cost, total revenue and total profit respectively. Constraints were analyzed using the Kendall's coefficient of concordance. The results showed that both broiler and layer production were profitable in spite of some constraints facing their production. The major constraints associated with layer production were inadequate finance and scarcity/high cost of broiler. For broiler production, the major constraints were inadequate finance and competition with imported frozen chicken. Access to credit, extension education and training on production practices were recommended as measures to improve commercial poultry production in the country.

Elghouth et al. (2013) during the last decade broiler industry experienced rapid growth in Sudan particularly in Khartoum State. The objective of this paper was to study some economic and management aspects beside the problems encountered in broiler production in the state. A sample of 30 production units and 50 dealers in broiler marketing were investigated using structured questionnaires. Descriptive statistics namely percentage together with partial budgeting technique were used in the analysis. The study revealed that most broiler production in Khartoum metropolis was produced by the large companies and that of Khartoum North was produced by the small and medium sized units. Most of broiler units (90%) operate under the open production units. The remaining units were of closed system environment, these produce 95.4% of the total broiler production. Most of the open production units were rented (67%). About 85% of the open production units depend on purchased feed and one day old chicks and 47% of them have no technical supervision. This was opposite for the closed production units as they own the farms, produce one old chicks and adopt technical supervision. The major cost components are cost of feed, one day old chicks and depreciation on fixed items estimated at 56.7%, 28.3% and 9% respectively. The main obstacle for effective production were the high cost of feed and chicks, instable electric current and electricity cost beside farm rent.

Masud and Islam (2013**)** the study was conducted on the basis of field level data from farmers of Thakurgaon district. It revealed that the total fixed cost per layer of layer farm was Tk. 370.77 that accounted, 19 percent of total cost. In case of broiler farms, the total fixed cost per broiler was Tk. 1.94 that accounted, 1.38 percent of total cost. The total variable cost per layer was Tk. 1579.56 that accounted, 81 percent of the total cost of the layer farm. The total variable cost per broiler was Tk. 138.79 which accounted 98.62 percent of the total cost. The study

showed that total cost per layer was Tk. 1950.33. In case of broiler farms total cost per broiler was Tk. 140.73 and total net return per layer was Tk. 263.81. In case of broiler farms, the net return was 13.82. The cost-benefit ratio was 1.15 for layer and 1.10 for broiler farms. The result showed the layer farms were more profitable than the broiler farms in the study areas.

Mgbakor and Chinonso (2013) this studied the profitability of Broiler production in Orumba South local government area of Anambra State, Nigeria. Respondents were drawn from various villages that made up Orumba South L.G.A of Anambra State. The respondents were small-scale, medium scale and large-scale broiler producers. Forty three (43) producers were selected through a system of random sampling. Data collected were on socio-economic characteristics, costs and returns and problems associated with fish producing in the study area. Structured questionnaires were the instrument used for data collection. Analytical tools used were percentages, gross margin and regression model. Percentages were used to describe the socio-economic variables and problems associated with fish production. While gross margin model and multiple regression model were used to determine the profitability and economic analysis of broiler production. The result revealed that more than half of the broiler producers were women with small- scale, medium-scale and large-scale in the proportion of 27.91%, 25.58% and 23.26% percent mostly in their middle ages of 41-50 years. Major problems faced were that of lack of capital, inadequate feed supply, drugs, diseases, poor transportation network, medications and labour seriously affected productivity. The study recommends feed subsidies by the government, provision of adequate incentives and supporting services to broiler producers and releasing of loans to farmers irrespective of their scale as well as organizing training workshops to increase awareness in profitability of broiler production. All these would help develop the industry, thus boosting productivity in production.

Balamurugan and Manoharan (2014) the cost and return analysis of different sizes of integrated broiler farms in Theni District of Tamil Nadu State has been carried out based on the primary data collected from 150 broiler farmers for the period Mar 2011 to Feb 2012. The study concluded that the total fixed investments per bird have been highest on small farms, followed by medium and large farms. The total cost of meat production per bird, returns per bird over the variable costs has been found highest on small broiler farms, followed by medium and large farms. On the basis of net present value, and internal rate of return, investment in broiler farming has been found profitable in all farm-sizes, it being most profitable on large farms, followed by medium and small farms. The small broiler farms have been observed highly sensitive to increase in costs and decrease in net returns. The study has observed that broiler farming is a profitable venture and has a bright future in the Tamil Nadu agro based industry for improving economic status of the farming community in general and in the study are in particular.

Oladunni and Fatuase (2014) investigated the economic assessment of backyard poultry farming in Akoko North West Local Government Area of Ondo State, Nigeria. Primary data were used and a sample of 152 backyard poultry owners through a multistage sampling technique was drawn from the study. The data collected were analyzed using descriptive statistics, budgetary analysis and multiple linear regression model. The profitability analysis revealed that the cost of production and revenue per bird were N3,987.52 and N4,210.11 respectively with the gross margin and profit of N537.99 and N222.59 per bird respectively which indicated that the enterprise is profitable. The result of multiple regression showed that farming experience, education, costs of labour and feeds were the main factors that statistically determined backyard poultry productivity. Inadequate funds, unstable price, lack of access to extension services and expensive feeds were the major constraints encountering by the backyard poultry owners in the study area.

Cobanoglu, F. et al., (2014**)** recently, organic broiler chicken production has received more attention worldwide. This study has carried out an economic analysis to compare the profitability of organic versus conventional growing systems per unit of broiler meat production. To achieve this goal, 400 slow-growing broiler chickens (Hubbard Red-JA) were reared in an organic production system and the same number of fast-growing birds (Ross-308) in a conventional system. The profitability was deduced with an economic analysis that compared total costs and net income. Results showed that organic broiler meat can cost from 70% to 86% more with respect to variable and fixed costs when compared with conventional production. The main reasons for the higher cost of organic broiler meat were feed, labor, certification, and outdoor area maintenance. In conclusion, organic broiler meat production was more profitable than conventional rearing.

Mendes, A. S. et al., (2014) this study aimed at identifying the factors that affect the financial performance of broiler chicken production in Southwest of Parana state in Brazil, as well as to study the relationship of these factors with the social-economic situation of poultry farmers. Data were obtained from a questionnaire applied to broiler chicken farmers between February and March, 2011. The questionnaire included 39 questions relative to farmer's age, family size, land possession, capital invested in broiler farming, gross income per flock, training and broiler farming experience, production size, credit needs, technical service, labor, production problems, and bird weight at slaughter. Data were submitted to descriptive statistical analysis. The relationship between production data and financial performance was determined using Pearson correlation coefficient, at 95% confidence level. Approximately 64.84% of the interviewed broiler farmers in Parana state presented medium to low financial performance. Factors such as education level, facility size, labor, gross income per flock, and average bird

weight at slaughter had a positive impact on financial performance. The production problems that most affected the broiler production were environmental challenges, poor feed conversion, as well as management problems and low-quality chicks.

Ganesh Hegde (2014) attempt to study on production performance of commercial broilers from 108 broiler farms having a total population of 8,00,000 birds was collected by a field study. Production parameters like age and body weight at marketing, feed efficiency and live ability under different management practices were studied. The results indicated that average age at marketing was 48 days, body weight was 1.92 kg, feed efficiency was 2.13 and live ability was 94 per cent. The age at marketing and live ability was not affected by any of the management practices. The body weight was more in Hubbard strain of birds. Feed efficiency was more in large farms having more than 4000 birds.

Musaba, E.C. Mseteka, M. (2014**)** over the last two decades Zambia has experienced a rapid growth in poultry production and a large share of broiler meat production has been contributed by small scale urban producers. This study aims to estimate the economies of scale and cost efficiency of small scale broiler farmers in Zambia using a Cobb-Douglas cost function and the inefficiency effects model. Data were collected from 90 small scale broiler farmers in the city of Lusaka selected using a snowball sampling method. The results shows that cost efficiency scores ranged from 0.76 to 0.99 with a mean of 0.958. . For a farmer with the minimum efficiency, she/he could make cost savings of about 24% and yet produce the same level of output using the available technology. The cost inefficiency significantly decreased with age, education and poultry training. Policy implications are that government should encourage young people be efficient poultry producers, enhance farmer's level of education, training on poultry rearing skills including feeds and

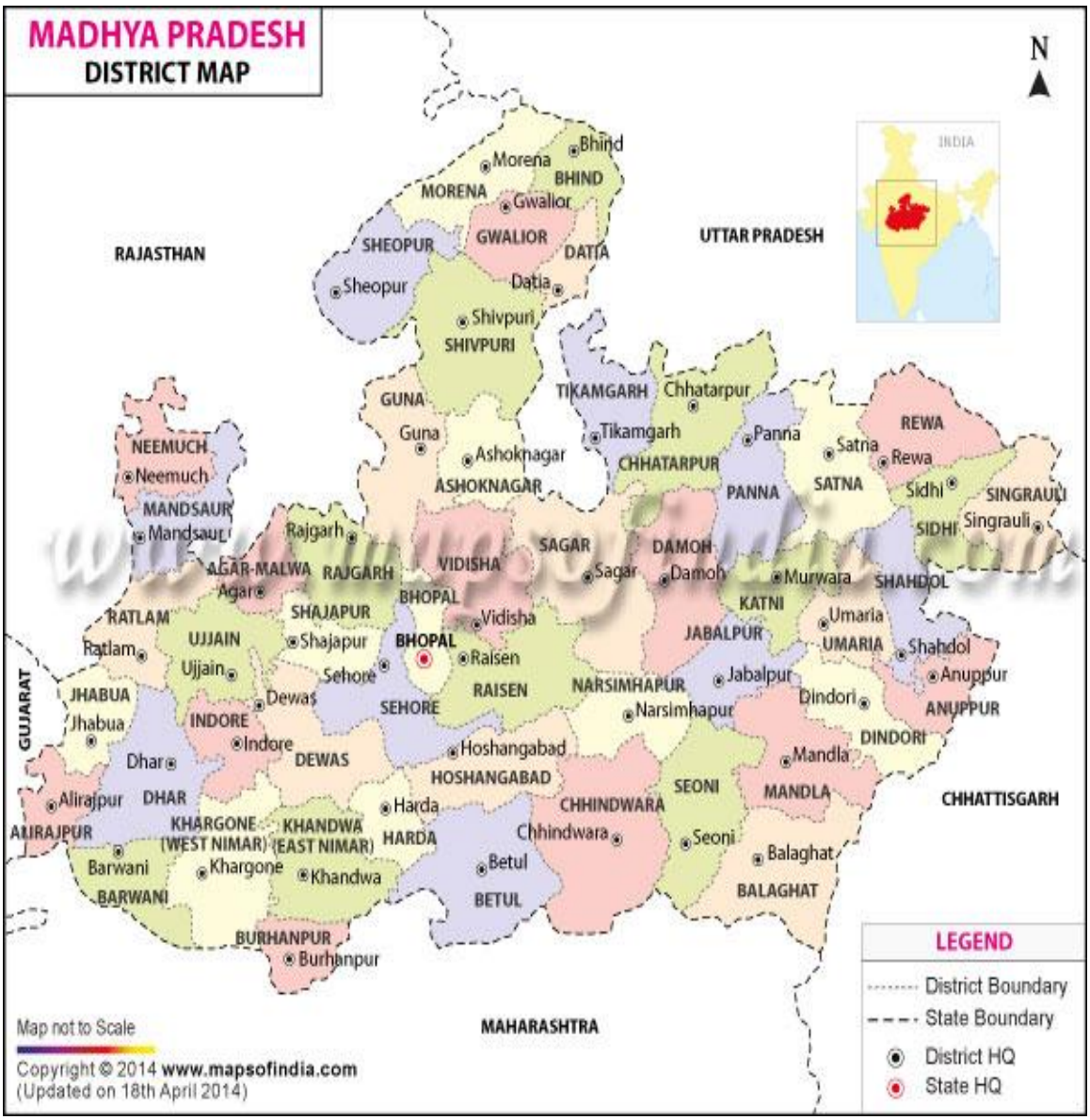
feeding since feed is a major determinant of broiler production cost. This can be achieved through short term trainings and extension services arranged during weekends and holidays to allow small scale poultry keepers with full-time jobs to participate.

Tuffour, M. Oppong, B. A. (2014**)** the study examines profit efficiency and its determinants in broiler production in the context of profit maximization as an incentive for optimum production. The study uses the stochastic frontier approach with the application of the Cobb-Douglas profit function. A cross sectional data was obtained from one hundred poultry producers in Greater Accra Region using a multistage sampling method. The results of the study indicated that price of labor significantly reduced profit but the price of day old chick increased profit. The result further revealed that broiler producers were able to realize 54% of their frontier profit on the average. The study recommends that the inputs should be made available to farmers at competitive prices and the quantity of labor use should be declined because the current level is uncompetitive. Training should also be provided to less experienced farmers to enable them adopt the best poultry farming practices.

PROFILE OF THE STUDY AREA

The knowledge of the study area is essential for understanding the important features of the area. This will facilitate the discussion with respect to similarities and variation of various components and that will helpful in providing the background of the region and importance of the study. The details on the above aspects have been presented in this chapter.

Fig.1. Madhya Pradesh District Map



3.1 General Characteristics of the District

Balaghat District was constituted during the years1967-73 by amalgamation of parts of the Bhandara, Mandla and Seoni districts. The headquater of the district was originally called “Burha “or “Boora“. Later, however, this name replaced by “Balaghat”, which was originally the name of the district .The Wainganga is the most important river of the district

3.2 Location & Geographical Area.

The Balaghat District looks like a flying bird and is situated in southern part of Jabalpur division. It occupies the south eastern region of the Satpura and Upper Wainganga Valley. The district spans over a degree from 21.19' to 22.24' North and 79.31 to 81.3' East. The total area of the district is 924500 hectare and bounded by Rajnandgaon in the East, Seoni in the West, District Mandla in the North and District Bhandara of Maharashtra State in the south. The Wainganga River separates the district from Seoni while the rivers Bawanthadi and Bagh define the inter-state boundary.

3.3 Topography

The Balaghat district is southern lowlands, aslightly undulating plain, comparatively well cultivated and drained by the Wainganga, Bagh, Deo, Ghisri and Son rivers. A long narrow valley known as the Mau Taluka , lying between the hills and the wainganga river and comprising a long , narrow ,irregular – shaped lowland track , intersected by hill range and cover with dense jungle and running from north to south . The District is situated at hills of the Raigarh bichhia track , there is irregular ranges of hills , The highest points of hills Lanji 2500 feet, Tepagarh hills about 2600ft.and Bhainsaghat range about 3000 ft above the sea.

3.4 Forest

The District is very rich in forest wealth. About 52% of the area is covered with forest. Teak, Sal, Bamboo and Saja are the main trees. Almost 25 years ago the district was nicknamed as "Hunters Paradise". District is still proud of its varied fauna consisting of Tigers, Leopard, Bear, Neel-Gai, Deer & Bison on one side and birds like Peacock, Re DBulbul and Koyal etc.

3.5 Administrative Set Up.

The District is under Balaghat division of MP. There are 04 Sub Division, 08 Tehsils, 02 Sub Tahsils and 10 Development Blocks in the district. The District Headquarter is at Balaghat.

Fig. 2. Balaghat District Map

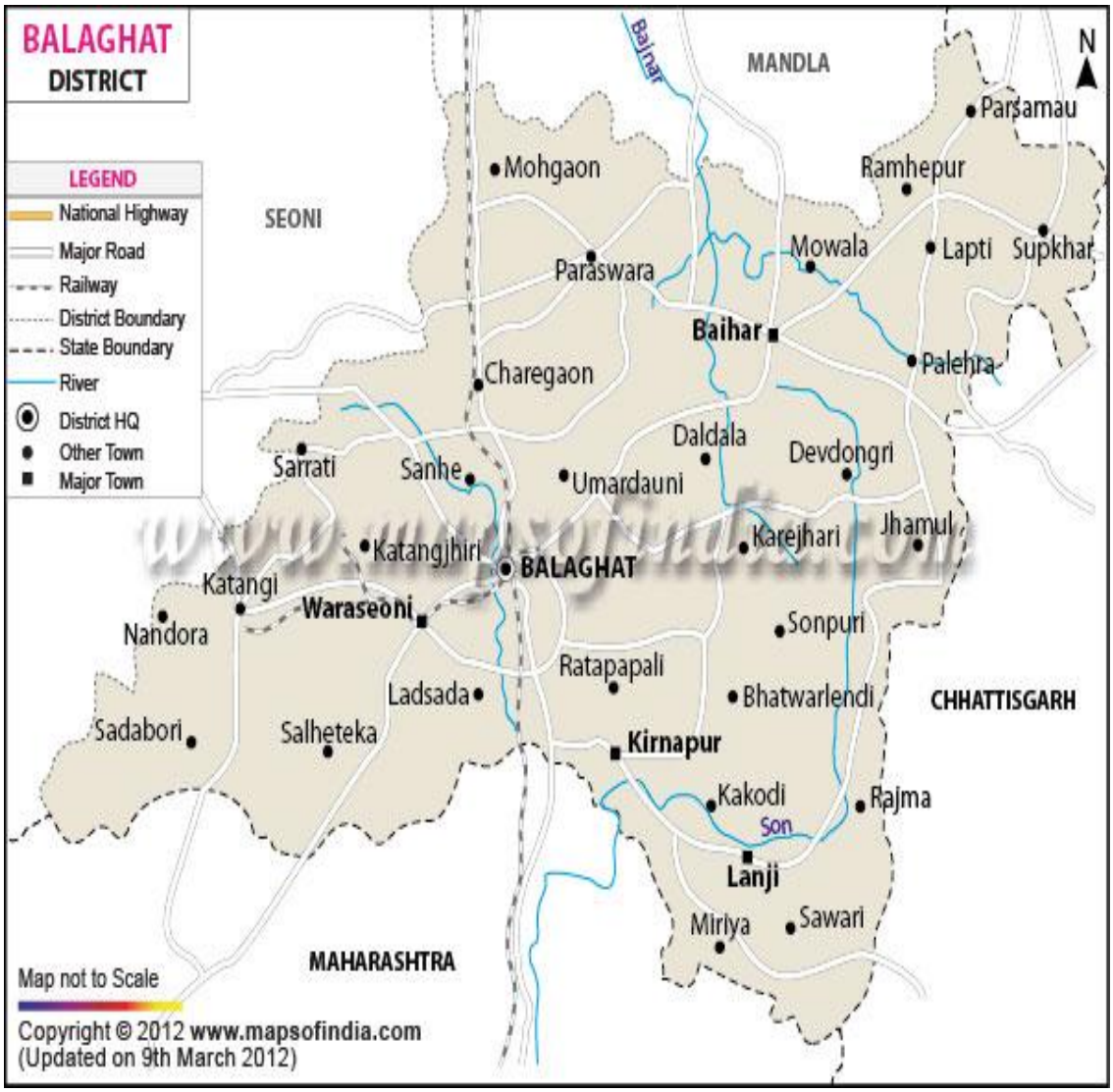


Table 3.1. Land use pattern of the Balaghat district

(000 ha)

Sr. No.	Content	Area	Percent
1.	Geographical area	924.5	
2.	Cultivable area (net sown area+ current fallows +other fallows.)	302.5	32.72
3.	Forest area	505	54.62
4.	Land under nonagricultural use	47.4	5.12
5.	Permanent pasture	30.9	3.34
6.	Cultivable wasteland	28	3.02
7.	Land under Misc. tree crops and groves	0.7	0.07
8.	Barren and uncultivable land	9.5	1.02
9.	Current fallow	13.4	1.44
10.	Other fallow	15.9	1.71
11.	Net sown area	273.2	29.55
12.	Area more than once	68.2	7.37
13.	Gross cropped area	341.4	347.92
14.	Cropping intensity	-	125
15.	Net irrigated area	124.7	13.48
16.	Gross irrigated area	141.5	15.30
17.	Rain fed area	148.5	16.06

Source:- NBSS & LUP, Nagpur

The land utilization pattern of Balaghat district is shown in Table 3.5 inferred that the total geographical area of Balaghat district is 924.5 hectares out of which 32.72 per cent was under cultivation and 5.12 percent was put under non agriculture uses. The forest area covered only 54.62 percent to the total geographical area. The percentage of area under permanent

pasture was 3.34 percent. The current fallow land and cultivable waste land accorded for 1.44 and 3.02 percent can be brought under ploughing with planned development of crop production system. The double cropped area was observed to be 7.37 and percent to the total cropped area at the district and block respectively.

The net irrigated area was 124.7 thousand ha and covered 13.48 percent to net sown area. The rainfed area148.5 thousand ha Balaghat district.

Balaghat District Population

In 2011, Balaghat had population of 1,701,698 of which male and female were 842,178 and 859,520 respectively. In 2001 census, Balaghat had a population of 1,497,968 of which males were 740,749 and remaining 757,219 were females. Balaghat District population constituted 2.34 percent of total Maharashtra population. In 2001 census, this figure for Balaghat District was at 2.48 percent of Maharashtra population.

Balaghat district population growth rate

There was change of 13.60 percent in the population compared to population as per 2001. In the previous census of India 2001, Balaghat district recorded increases of 9.70 percent to its population compared to 1999.The initial provisional data released by census India 2011.Shows that density of Balaghat district for 2011 is 184 people per sq. km. In 2001. Balaghat district density was at 162 people per sq. km. Balaghat district administers 9229 square km. of areas.

Average literacy rate of Balaghat in 2001 were 77.90 compared to 68.72 of 2001. If things are looked out at gender wise, male and female literacy were 85.36 and 69.04 respectively. For 2001 census, same figures stood at 80.63 and 57.18 in Balaghat district. Total literate in Balaghat district were 1147623 of which male and female were 626468 and 521155 respectively. In 2001, balaghat district had 870688 in its district.

With regards to sex ratio in Blaghat it stood at 1021 per 1000 male compared to 2001 census figure of 1022. The average national sex ratio in India is 940 as per latest reports of census 2011 directorate. In 2011 census, child sex ratio 967 girls per 1000 boys compared to figure of 968 girls per 1000 boys of 2001 census data.

In census enumeration, data regarding child under 0-6 age were also collected for all district including Balaghat. There were total 212.931 children under age of 0-6 against 230,908 of 2001 census of total 212,931 male and female were 108278 and 104,653 respectively. Child sex ratio as per census 2011 was 967 compared to 968 of census 2001. In 2011, children under 0-6 formed 12.51 percent of Balaghat district compared to previous census of India.

Table 3.2. General information of Balaghat District

Description	2011	2001
Actual Population	**1,701,698**	**1,497,968**
Male	842,178	740,749
Female	859,520	757,219
Population Growth	**13.60%**	**9.70%**
Area Sq. Km	9,229	9,229
Density/km2	**184**	**162**
Proportion to Madhya Pradesh Population	2.34%	2.48%
Sex Ratio (Per 1000)	**1021**	**1022**
Child Sex Ratio (0-6 Age)	967	968
Average Literacy	**77.09**	**68.72**
Male Literacy	85.36	80.63
Female Literacy	69.04	57.18

Total Child Population (0-6 Age)	**212,931**	**230,908**
Male Population (0-6 Age)	108,278	117,354
Female Population (0-6 Age)	104,653	113,554
Literates	**1,147,623**	**870,688**
Male Literates	626,468	502,654
Female Literates	521,155	368,034
Child Proportion (0-6 Age)	**12.51%**	**15.41%**
Boys Proportion (0-6 Age)	12.86%	15.84%
Girls Proportion (0-6 Age)	12.18%	15.00%
Actual Population	**1,701,698**	**1,497,968**
Description	**Rural**	**Urban**
Population (%)	**85.61 %**	**14.39 %**
Total Population	**1,456,882**	**244,816**
Male Population	719,794	122,384
Female Population	737,088	122,432
Sex Ratio	**1024**	**1000**
Child Sex Ratio (0-6)	972	932
Child Population (0-6)	**186,683**	**26,248**
Male Child(0-6)	94,690	13,588
Female Child(0-6)	91,993	12,660
Child Percentage (0-6)	**12.81 %**	**10.72 %**
Male Child Percentage	13.16 %	11.10 %
Female Child Percentage	12.48 %	10.34 %
Literates	**960,218**	**187,405**
Male Literates	527,089	99,379
Female Literates	433,129	88,026

Table 3.3 Existing Status of Industrial Areas In The District Balaghat

S. No.	Name of Ind. Area	Land acquired (In hectare)	Land developed (In hectare)	Prevailing Rate Per Sqm (In Rs.)	No of Plots	No of allotted Plots	No of Vacant Plots	No. of Units in Production
1	Industrial Area Gara Bhalaghat	6.492	3.523	1% of Premium	13	20	Nil	09
2	Semi urban Industrial eststate Balaghat	2.407	1.781	1% of Premium	09	09	nil	09
3	Industrial Area Sarandi	8.01	5.21	1% of Premium	10	08	02	02
4	Industrial Area Bodunda Kala	122.45	122.45	1% of Premium	02	01	01	--
	Total	**139.359**	**132.964**	-----	**34**	**38**	**3**	**75**

Source: DIC Balaghat

3.4 Industrial Scenario of Balaghat District.

Table3.4 Industry at a Glance

Sr. No.	Head	Unit	Particulars
1.	Registered Industrial Unit	No.	10223
2.	Total Industrial Unit	No.	10223
3.	Registered Medium & Large Unit	No.	02
4.	Estimated avg. no. of daily worker employed in Small Scale Industries	No.	160
5.	Employment in Large and Medium Industries	No.	96
6.	No. of Industrial Area	No.	04
7.	Turnover of Small Scale Industries	In Lacs	28 Crore
8.	Turnover of Medium & Large Scale Industries	In Lacs	325 Crore

Source: DIC Balaghat

Large Scale Industries / Public Sector Undertakings

List of the units in Balaghat & NearBy Area

1. M/s Ramnik Power and allies pvt. Ltd.

   Sarandi Baraseoni, Dist.- Balaghat

2. M/s Hindustan copper limited

   Malajkhand , Dist.- Balaghat

3. M/s Manganese ore India limited

   Barveli, Dist.-Balaghat

Table 3.5 Details of Existing Micro & Small Enterprises and Artisan Units in the District

Nic code no.	Type of Industry	Number of units	Investment (Lakh Rs.)	Employment
20	Agro based	2869	2064.02	6880
22	Soda water	Nil	Nil	Nil
23	Cotton textile	Nil	Nil	Nil
24.	Woolen, silk & artificial Thread based clothes.	01	20.00	11
25.	Jute & jute based	01	45.03	08
27.	Wood/wooden based furniture	1040	520.04	2960
28.	Paper & Paper products	Nil	Nil	Nil
29.	Leather based	340	316.02	861
31.	Chemical/Chemical based	12	130.00	120
30.	Rubber, Plastic & petro based	02	90.00	30
32.	Mineral based	23	144.03	460
33.	Metal based (Steel Fab.)	683	1175.01	2839
35.	Engineering units	64	1446.02	358
36.	Electrical machinery and transport equipment	Nil	Nil	Nil
97.	Repairing & servicing	97	240.00	456
01.	Others	3372	2176.02	8292
27.	Wood/wooden based furniture	1040	520.04	2960

Source: DIC Balaghat

RESULTS AND DISCUSSION

This chapter deal with the analysis of the data collected for studying the economics of production of Broiler in Balaghat districts of Madhya Pradesh. An attempt is made to know the present status of poultry unit, cost and return analysis of broiler for different size groups of poultry units, and marketing aspect of broiler production.

5.1 Present status of poultry unit of Balaghat District

Madhya Pradesh is one of the major eggs producing state in India. The main egg and broiler production and marketing centers in the state are Jabalpur, Indore and Bhopal. It also has the biggest hatcheries of the state. As the information collected from the different poultry farm regarding the number of poultry units and their capacity. Balaghat district had 131 poultry farm of different size and details are given in Table 5.1 and 5.2.

Table 5.1 Block wise distribution of number of poultry unit in Balaghat district.

S. No.	Name of Blocks	Total Numbers of poultry unit
1.	Bhaihar	19 (14.50%)
2.	Balaghat	25 (19.10%)
3.	Birsa	02 (1.52%)
4.	Katangi	03 (2.20%)
5.	Khairlanji	12 (9.16%)
6.	Kirnapur	12 (9.16%)
7.	Lalburra	06 (4.55%)
8.	Lanji	13 (9.92%)
9.	Paraswada	21 (16.03%)
10.	Waraseoni	18 (13.86%)
	Total	**131 (100%)**

Table 5.2 Information about number of poultry unit under various broiler farms in the study area

S. No.	Name of Blocks	Total no's of poultry unit (broiler farm)	Total no's of broiler	Total no's of operating lots	Average no's of broiler birds/ farm
1	Bhaihar	19	100000	80	5263
2	Balaghat	25	141200	05	5648
3	Birsa	02	15500	11	7750
4	Katangi	03	24000	13	8000
5	Khairlanji	12	85000	35	7083
6	Kirnapur	12	70000	33	5833
7	Lalburra	06	30000	28	5000
8	Lanji	13	88000	45	6769
9	Paraswada	21	112000	90	5333
10	Waraseoni	18	90000	85	5000
	Total	**131**	**755700**	**425**	**61679**

In Balaghat district, total 131 poultry unit (broiler farm) were established in the year2013-14. It was observed that the number of birds increased significantly for meat purpose during the last decade. Among the blocks of Balaghat district, highest numbers (25) of poultry unit in different size were present in Balaghat block which shows the favorable trade in the future. The variation in poultry farm was found in different block of the district.

The average number of broiler birds per farm was also found vary in different block it may be due to number of poultry farm as well as number of lot maintained by the poultry owner in the Balaghat district.

In the study area following two types of poultry farm were functioning,

(a) Unorganized poultry farms: These are known as backyard poultry farm operating in rural areas as small ventures.

(b) Organized poultry farms : It is classified into two:

(i). Commercial layers farms (for eggs production)

(ii). Commercial broiler farms (for meat production)

In the study, only organized broiler farms were considered.

Selected poultry farms

In the study, total 10 poultry farms were considered and these farms further categories in to two group on the basis of no's of birds and details are given below in Table 5.3

Table 5.3 Details about selected poultry farm

Group	Name of poultry farm	Location	Total No's of Birds(Five lots)
I	Guddu poultry farm	Aamgaon	5800
	Krishna poultry farm	Devari	9300
	Kamlesh poultry farm	Awalajhari	4000
	Giri poultry farm	Kosmi	5000
	Naveen poultry farm	Bharweli	4000
II	Baghel poultry farm	Mohgaon	11500
	Harsh poultry farm	Hatta	27000
	Katre poultry farm	Gonglai	18500
	Anand poutry farm	Roshna	33000
	Ravi poultry farm	Jagpur	12000

5.2 General information of sample respondents

5.2.1 Caste

Caste wise distribution of sample respondent have been provided in Table 5.4

Table 5.4: Caste wise distribution of sample respondents.

S. No.	Size group	Numbers	Caste			
			SC	ST	OBC	GEN.
1	I Group	05	-	-	4	1
2	II Group	05	-	-	5	-
	Total	10	0	0	9	1

It was observed that under 1st and 2nd group 80 and 100 per cent respondent were belonged to OBC group respectively in the study area and remaining comes under general category.

5.2.2 Age groups

Age may also be an important factor which influences the adoption of commercial poultry farming. The age of selected respondents are provided in the Table 5.5.

Table 5.5 Age of sample respondents

S. No.	Size group (No.)	Age Group			Total
		Below 30 year	30-40 year	41and above year	
1	I Group (05)	-	03	02	05
2	II Group (05)	02	03	-	05

The majority of sample respondent in both the group comes under 30-40 year which shows that young entrepreneur are involved in the poultry business in the study area.

5.2.3 Educational status of sample respondents.

Educational level of the sample respondent is one of the important factors which effecting poultry production and therefore attempt had been made to know the education status of the owners and details are given in the Table 5.6.

Table: 5.6. Educational status of sample respondents

Size Group (No.)	Educational status				Total
	Illiterate	Upto middile	H.S.C.	Graduate And above	
I Group (05)	-	01	03	01	05
II Group (05)	-	01	02	02	05

Under the 1st group of poultry owner, 3 person upto HSC, 1 up to middle and only 1 up to graduate level educated and near about same pattern was also observed in 2nd group.

5.2.4 Average number of birds.

Balaghat district having number of poultry unit of different size. Out of which 10 sample poultry units were selected and further categorized into two size groups. The group wise average numbers of birds are given in Table 5.7

Table: 5.7 Average numbers of birds per cycle.

Group	Average number of bird per cycle	No. of unit
I(1000-2000)	1084	5
II(2001 & above)	4164	5
Overall average	2624	

Table shows that the overall average number of birds per cycle was found 2624. The average number of birds per cycle was estimated 1084 and 4164 in 1st and 2nd group respectively. The average number of birds was vary as due to different range was considered in the both the groups.

5.3 Cost and return of poultry farm

5.3.1. Investment on shed and equipment.

Sheds is very important pre-requisite for poultry farms and this require a large amount of capital investment as birds can't be kept without proper sheds. Poultry birds are generally very sensitive to environment and need proper protection for rearing to obtained good return from them. The value of equipments like's cages, water supply line, feeders and others equipments comes under fixed cost. The investment on sheds and equipments on different size of poultry farms is given in the Table 5.8.

Table 5.8 Investment on poultry shed and equipment

Unit: Rs.

Items	Group I	Group II
Average No. of birds per cycle	1084	4164
Value of Shed	350000	900000
Value of equipments	44450	116781
Value of others items (Vehicle, well, pump set etc.)	50000	100000
Total investment per cycle (Rs.)	444450(410.00)	1116781(268.19)

Fig in bracket shows the total investment per bird of concerns items

Table shows that investment on sheds and equipments is directly related with the size of poultry farm. As the size of poultry farm increase then the investment on sheds and equipments also increases. Investment on sheds, equipment and the size of flock are more than the cost of per bird's decreases. On an average the total investment on fixed cost per birds was estimated to be Rs. 410 and 268.19 to maintain the poultry farm in 1st and 2nd group respectively.

5.3.2 Distribution of funds

Table: 5.9 Distribution of funds on sheds, equipment and for other items:

S. No.	Items	Group I (%)	Group II (%)
1	Shed	79	80
2	Equipment	10	11
3	Other items	11	9
4	Total	100	100

It revealed from the table that about 80 per cent capital was invested on shed purpose by both the group and reaming 20 per cent capital was utilized for equipment and other items purpose.

5.4 Fixed and variable cost:

Fixed cost and variable cost both were included on raising poultry birds for broiler production purpose. Fixed cost includes depreciation on sheds, depreciation on equipments, and interest on fixed capital. Variables cost include feed cost, cost of day old chicks, medicine cost, labour cost, interest on working capital and miscellaneous cost (electricity charges, telephone charges ,insurance, veterinary expenses) incurred during the whole bird cycle.

5.5 Expenses on feeding:

Under variable cost, feed cost is the major component which covers different type of feed, required for development of different stages of birds and details have been provided in Table 5.10

Table 5.10: lot wise (broiler) requirement and its expenses on feeds

Group	lot	Average number of birds	Prestarter (kg/birds)	Value (Rs.)	Starter (kg/birds)	Value (Rs.)	Finisher (kg/birds)	Value (Rs.)	Total Feed(kg/ birds)	Value (Rs.)
I	1	1260	126	3654	1260	32760	1890	49140	3276	85554
	2	1040	104	3016	1040	27040	1560	40560	2704	70616
	3	1160	116	3364	1160	30160	1740	45240	3016	78764
	4	1300	130	3770	1300	33800	1950	50700	3380	88270
	5	660	66	1914	660	17160	990	25740	1716	44814
	Average	**1084**	**108.4**	**3143.6**	**1084**	**28184**	**1626**	**42276**	**2818.4**	**73603.6**
II	1	5200	520	15080	5200	135200	7800	202800	13520	353080
	2	4800	480	13920	4800	124800	7200	187200	12480	325920
	3	5120	512	14848	5120	133120	7680	199680	13312	347648
	4	5100	510	14790	5100	132600	7650	198900	13260	346290
	5	600	60	1740	600	15600	900	23400	1560	40740
	Average	**4164**	**416.4**	**12075.6**	**4164**	**108264**	**6246**	**162396**	**10826.4**	**282735.6**
Overall average		**2624**	**262.4**	**7610**	**2624**	**68224**	**3936**	**102336**	**6822.4**	**178169.6**

The sample respondent of both group (poultry owner), maintain to run the poultry farm by five lot of birds. In first and second group, the average number of birds was 1084 and 4164 respectively. The variation in number of birds in each lot and group may be due different range of birds in particular size group. For raising of chicks, different type of feeding material are required. It revealed from the table that the more fund are required to purchase finisher feeding material then the starter and per starter. Among the feeding material, 57, 38, and 5 per cent funds are required for finisher, starter and pre starter feed respectively to maintain five lot of birds in both the group.

Overall it could be concluded that the total an amount of Rs. 178169 was needed to maintain 2624 birds in the poultry farm. On an average per bird per cycle feeding cost was estimated to be Rs. 68.

5.6. Cost of raising chicks for broiler production.

Fixed cost and variable cost both were included on raising poultry birds for broiler production purpose. Fixed cost includes depreciation on sheds, depreciation on equipments and interest on fixed capital. Variables cost include feed cost, cost of day old chicks, medicine cost, labour cost, interest on working capital and miscellaneous cost (electricity charges, telephone charges, insurance, veterinary expenses) and incurred during the whole bird cycle.

Breakup of variable cost for raising chicks

The group wise breakup of variable cost for raising chicks have been provided in Table 5.11

Table 5.11 Breakup of variable cost for raising chicks (per cycle)

S. No.	Items	Group I (Rs.)	Group II (Rs.)	Average (Rs.)
1	Average no's of birds	1084	4164	2624
2	Feeding material	73603.6 (61%)	282735.6 (63%)	178169.6
3	Labour charges	4340	9548	6944
4	Cost of litter	430	1520	975
5	Day old chicks	27100(25) (23%)	104100(25) (23%)	65600(25)
6	Medicine charges	5420	20820	13120
7	Electricity charges	510	1640	1075
8	Interest on working capital @ 12.5%	8110.18	30602.47	19356.32
	Total(Rs.)	**119513.78 (100%)**	**450966.07 (100%)**	**285239.92**

Under variable cost, the expenses on feeding material and cost of day old chicks covers about 92 per cent under 1st group while in 2nd group the coverage of variable cost for feeding material and chicks was 86 percent. The remaining expenses are required for payment to labour, medicine cost, electricity charges and interest on working capital.

Overall it could be concluded that the average variable cost was estimated to be Rs. 285239.92 per cycle which covers 2624 number of birds under poultry farm in the study area.

5.7 Distribution of total cost

For maintaining the poultry farm (broiler purpose), both variable and fixed cost are included and group wise estimated total cost have been given in the Table 5.12

Table 5.12: Distribution of total cost under broiler production

S. No.	Particulars	Group I	Group II	Average
1	Fixed Cost			
	Depreciation on sheds	3835.6	9862.8	6849.2
	Depreciation equipment	486.8	1279.6	883.2
	Interest on fix capital@ 10%	242.05	623.97	433.01
	Total Fixed cost (Rs.)	**4564.45 (4%)**	**11766.37 (3%)**	8165.41 (3%)
2	variable cost	**119513.78 (96%)**	**450966.07 (97%)**	285239.9 (97%)
3	Total cost	**124078.23**	**462732.44**	**293405.33**

It revealed from the table that the overall total cost per cycle for broiler production was found to be Rs. 293405.33. In both the group about 96 per cent variable cost was covers to total cost. In fixed cost, major portion was covered by depreciation on sheds in both the size group of poultry farm.

5.8. Gross income of poultry farms.

The selling value of broiler and value of manure from litter beds are the two major components of gross income in poultry farm. Estimated gross income for the two different sizes of poultry farms are given in the Table 5.13.

Table: 5.13: Gross income of poultry farms (per cycle)

S. No.	Sources of income	1st group	2nd group	Average
1	Value of Broiler production(Rs.)	162600	599616	381108
2	Value of Manure(Rs)	1600	5060	3330
	Gross income (Rs.)	164200	604676	384438

Table shows that the average gross income per cycle from all the sources worked out to be Rs 164200 and Rs 604676 for 1st and 2nd group poultry farms respectively. About 99 per cent share in the average gross income was covers from broiler production.

It could be concluded that the gross income increase per bird as in the size of poultry farm increases. If the poultry farm owner maintains five hundred birds in per cycle then he will received Rs. 73250 in forty days.

Income from poultry manures by 2nd size group received three times more than 1st size group, it may be due to variation in numbers of birds in per cycle. The value of manure is not so high because poultry owner Could not keep the waste materials of poultry for longer period.

5.9. Net return from selected poultry farm (per cycle)

For estimation of net return, gross income and gross expenses are required to know the profitability of the business. The details about estimated net return from selected poultry farm are given in Table 5.14

Table: **5.14 Net returns per cycle**

S. No.	Particulars	1st group	2nd group	Average
1	Average no's of birds	1084	4164	2624
2	Gross income per cycle	164200	604676	384438
3	Gross expenses per cycle	124078.23	462732.44	293405.33
4	Net return per cycle (Rs.)	40121.77	141943.56	91032.67
5	Cost Benefit ratio	1:1.30	1:1.32	1:1.31

It revealed from the table that on an averages the net return per cycle come to be Rs. 40121.77 and Rs. 141943.56 for the 1st and 2nd group respectively. Table also shows that as the poultry farm size increase, the net return also increases. As far as benefit cost ratio is concerned, on an average 1:1.31 ratio was observed and ratio was at par in both the group.

5.10 Cost of production (per cycle)

The cost of production per broiler in particular cycle under different size of selected poultry farm have been provided in Table 5.15

Table 5.15 Estimated cost of production (per cycle)

(Unit in Rs.)

S. No.	Particular	1st group	2nd group	Average
1	Total cost per cycle	124078.23	462732.44	293405.33
2	Value of poultry manure (per cycle)	1600	5060	3330
3	Total production of broiler (No's)	1084	4164	2624
4	Cost of production per broiler(Rs.)	112.98	109.91	111.445

The cost of production per broiler was found Rs. 112.98 and 109.91 under 1st and 2nd group of poultry farm in the study area. The poultry owner of 1st and 2nd size group, maintain the 1084 and 4164 birds in per cycle and they required an amount of Rs. 124078.23 and 462732.44 for 1st and 2nd group respectively.

It could be concluded that on an average the cost of production per bird was Rs.111.445 found in the study area.

5.11 Marketing of broiler production

In the study area, two marketing agency ie Indian broiler and Simran were involved to purchase the broiler from selected poultry unit. Retailer also purchase the broiler through agency and then to sale the broiler to consumer. It was observed that no others wholesaler and retailer are directly purchase broiler from producer in the study area. The total number of birds were sold during different period through two marketing agencies are provided in the Table 5.16

Table 5.16 Selling numbers of broiler (birds) during different period

Agency	Group I				Group II			
	Mar-Jun	July-Oct	Nov-Feb	Total	Mar-Jun	July-Oct	Nov-Feb	Total
Indian broiler	1500 (42.87%)	800 (22.85%)	1200 (34.28%)	3500 (100%)	7000 (48.27%)	2500 (17.25%)	5000 (34.48%)	14500 (100%)
Simran	1000 (52.08%)	320 (16.66%)	600 (31.26%)	1920 (100%)	3000 (47.48%)	1104 (17.46%)	2216 (35.06%)	6320 (100%)
Total	2500 (46.13%)	1120 (20.66%)	1800 (33.21%)	5420 (100%)	10000 (48.04%)	3604 (17.31%)	7216 (34.65%)	20820 (100%)

The demand of broiler was not same in whole year. For selling purpose of broiler, year was divided into three period viz. (I) March-June (II) July- Oct. and (III)Nov.-Feb. In the study area, two marketing agency ie Indian broiler and Simran were performed the marketing activity as like wholesaler. About 46 to 48 per cent broiler was purchased by Indian broiler and Simran marketing agency during 1st period (march-June). It could be concluded that highest percentage of broiler was sell out during 1st period followed by 3rd and 2nd period. The same type of selling

pattern was observed under 2nd group, as in the case of 1st group in the study area which shows that more demand of broiler was observed during the 1st period ie. March- June then the 2nd and 3rd period. Overall the Indian broiler agency purchased 65 and 70 per cent broiler from the producer under the 1st and 2nd group of poultry farm respectively. While other agency ie. Simran purchased only 35 and 30 per cent broiler which shows that poultry owner gives more preference to Indian broiler marketing agency for selling of broiler in the study area.

5.11.1Marketing pattern of broiler

In the study area following two marketing channel was in existence and all the selected poultry owner sell out the broiler through these agencies.

Channel I Producer - Indian broiler – Retailer – Consumer

Channel II Producer – Simran – Retailer - Consumer

Estimated marketing cost, and margin under selected marketing channel was worked out for 100 birds and group wise details are given in Table 5.17

Under 1st group, if the producer sell the broiler to Indian broiler agency than on an average they will get Rs. 4714 as marketing margin (profit) for 100 birds. While selling by other marketing channel through Simran agency than they will get Rs. 3947 as profit for 100 birds. Regarding 2nd group, sample poultry owners also sell out the broiler through 2nd marketing channel and over all received Rs. 4492 and 3580 as profit for 100 birds through Indian broiler and simran agency respectively.The variation in estimated marketing cost under different marketing channel was also found. It may be due to transportation charge, labour charge etc.

Overall it could be concluded that 1st marketing channel is more profitable as compared to 2nd marketing channel in both the group of poultry farm in the study area.

Table 5.17 Estimated marketing cost and margin of broiler under selected group (For 100 birds)

Group I (1st marketing channel)

S. No.	Particulars	Producer			Indian Broiler			Retailer		
		1st (Mar-June)	2nd (July-Oct)	3rd (Nov-Feb.)	1st (Mar.-June)	2nd (July-Oct)	3rd (Nov-Feb.)	1st (Mar.-June)	2nd (July-Oct)	3rd (Nov- Feb.)
1	Purchase price	10159	10000	9000	15000	14600	14000	16400	16000	15600
2	Marketing cost	100	100	100	200	250	200	1000	800	700
3	Selling Price	15000	14600	14000	16400	16000	15600	21400	21000	20000
4	Marketing margin	4741	4500	4900	1200	1150	1400	4000	4200	3700

Second(2nd marketing channel)

S. No.	Particulars	Producer			Simran			Retailer		
		1st (Mar-June)	2nd (July-Oct)	3rd (Nov-Feb.)	1st (Mar.-June)	2nd (July-Oct)	3rd (Nov-Feb.)	1st (Mar.-June)	2nd (July-Oct)	3rd (Nov- Feb.)
1	Purchase price	10700	10200	10000	14600	14400	14000	16000	15600	15200
2	Marketing cost	80	100	80	200	250	200	1000	1200	500
3	Selling Price	14600	14400	14000	16000	15600	15200	21000	20000	19000
4	Marketing margin	3820	4100	3920	1200	950	1000	4000	3200	3300

GROUP II (1st marketing channel)

S. No.	Particulars	Producer			Indian Broiler			Retailer		
		1st (Mar-June)	2nd (July-Oct)	3rd (Nov-Feb.)	1st (Mar.-June)	2nd (July-Oct)	3rd (Nov-Feb.)	1st (Mar.-June)	2nd (July-Oct)	3rd (Nov- Feb.)
1	Purchase price	10024	9500	9100	14400	14000	14000	16000	15600	15200
2	Marketing cost	100	100	100	200	250	200	1100	1000	900
3	Selling Price	14400	14000	14000	16000	15600	15200	21000	20000	20000
4	Marketing margin	4276	4400	4800	1400	1350	1000	3900	3400	3900

Second (2nd marketing channel)

S. No.	Particulars	Producer			Simran			Retailer		
		1st (Mar-June)	2nd (July-Oct)	3rd (Nov-Feb.)	1st (Mar.-June)	2nd (July-Oct)	3rd (Nov-Feb.)	1st (Mar.-June)	2nd (July-Oct)	3rd (Nov- Feb.)
1	Purchase price	10500	10100	9800	14000	13800	13600	15200	14800	14400
2	Marketing cost	80	100	80	200	250	200	800	600	500
3	Selling Price	14000	13800	13600	15200	14800	14400	20000	19000	18000
4	Marketing margin	3420	3600	3720	1000	750	600	4000	3600	3100

5.12 Marketing margin

Estimated marketing margin under selected marketing channel are provide in Table 5.18

Table 5.18 Marketing margin during different selling period

Group I

Particulars	Period I		Period II		Period III	
	Marketing channel		Marketing channel		Marketing channel	
	1st	2nd	1st	2nd	1st	2nd
Producer	4741 (47.41)	3820 (38.20)	4500 (45.00)	4100 (41.00)	4900 (49.00)	3920 (39.20)
Agency (Indian broiler/ Simran)	1200	1200	1150	950	1400	1000
Retailer	4000	4000	4200	3200	3700	3300

GROUP II

Particulars	Period I		Period II		Period III	
	Marketing channel		Marketing channel		Marketing channel	
	1st	2nd	1st	2nd	1st	2nd
Producer	4276 (42.76)	3420 (34.20)	4400 (44.00)	3600 (36.00)	4800 (48.00)	3720 (37.20)
Agency (Indian broiler/ Simran)	1400	1000	1350	750	1000	600
Retailer	3900	4000	3400	3600	3900	3100

Fig. in bracket shows the marketing margin (profit) of one bird for concern period as well as channel.

Table shows that producers sell out the broiler in three different period in the year. Under 1st marketing channel producers of 1st group were received more profit (4900) in the third period as compared to 1st (4741) and 2nd period (4500). Poultry owners of 2nd group also uses same type of marketing channel but the margin was not same it may be due to involment of different marketing agency. It was observed that maximum

(4800) margin was achieved by the producers during 3rd period followed by 2nd (4400) and 1st (4276) period.

The Indian broiler (1150 to1400) and Simran marketing agency (950 to 1200) also received profit (margin) and due to that they continue performed the poultry business. Regarding retailers those who involved in marketing of broiler also getting good margin and run the poultry business profitable.

5.13 Problem faced by the poultry owners

In poultry enterprise, number of problems faced by the poultry owners in the study area, major problems was identify and details are given in Table 5.19

Table 5.19 Problem faced by the poultry owner

S. No.	Particular	Group I (5)	Group II (5)
1	Problem of poultry health	5 (100%)	5 (100%)
2	Adulteration in poultry feed	3 (60%)	4 (80%)
3	Problem of not availability of sufficient water	3 (60%)	3 (60%)
4	Lack of trained and skilled labour	3 (60%)	4 (80%)
5	Problem of storage of poultry manure	3 (60%)	4 (80%)
6	Problem of transportation	4 (80%)	3 (60%)
7	Less number of marketing agency for purchasing broiler (birds)	4 (80%)	5 (100%)

It revealed from the table that the majority of sample poultry owners in both the group reported problem of poultry health as broiler (birds) easily infected from pathogenic bacteria, virus and such organisms can be transmitted through the visitor, vehicles other birds etc. The other major problem are adulteration of feed, less number of skilled and trained persons to managed the

poultry farm, required feeding material is not available in the market in due time. In marketing, only two marketing agency (wholesaler) performing the marketing activity in the study area. so respondent are morally bound to sale out the broiler in their own terms and condition.

In summer season, large amount of water is required for cooling which increases the cost of production and electricity are also required for maintaining the poultry farm.

Over all it could be concluded that the major problem were observed poultry health, not availability of skilled labour and less number of marketing agency etc. So its need more efforts are required by the concerned agency to solve the problem than poultry business may be developed in more efficiently manners and it will be helpful to improved the income and employment opportunity in the study area.

SUMMARY, CONCLUSIONS AND SUGGESTIONS

6.1 Summary

Poultry is one of the fastest growing segments of the agriculture sector in India today. Indian poultry industry is growing rapidly at a rate of 15-20 percent during last two decade.

India is one of the largest producers of poultry meat and eggs in the world. As per FAO statistics, India is the 3rd largest producer of eggs with annual production of 57 billion eggs and 5th largest producer of poultry meat with a production of 2.5 million tonnes of poultry meat (2012-2013) in the world. The current per capita availability of eggs is around 57 eggs per year during 2012-2013. The current per capita consumption of poultry meat is 2.5 kg. Meat production on the other hand has gone up close to four times 10.8 thousand tonnes in 2001-02 to 43 thousand tonnes in 2012-13. Eggs and chicken meat are the cheapest source of animal protein affordable by the masses.

In Madhya Pradesh Chhindwara, Jhabua, Alirjpur, Dhar, Indore, West Nimar, Sidhi, Balaghat, Betul and Jabalpur are the key district with significant number of both livestock and number of poultry birds in the state. Thus poultry business is a major source of income and employment in the region. In view of the importance of broiler production and awareness of its economics aspect this study has been undertaken in Balaghat district with following specific objectives

1. To Know the Present status of broiler production of poultry farm in Balaghat district.
2. To assess the cost of production of broiler production under selected unit of poultry farms.
3. To measures the marketing cost and margin of broiler production under different marketing channel in the study area.
4. To identify the constraints in broiler production and marketing and to suggest the remedial measures in the study area.

6.2. Conclusion

Balaghat district comprises of 10 blocks namely Balaghat, Waraseoni, Lalbura, Katangi, Paraswada, Baihar, Khairlanji, Laanji, Birsa and Kirnapur. Out of which Balaghat block of Balaghat district was selected on the basis of large no. of poultry units of different size. Out of 131 poultry units, only 25 units were actively in functioning in Broiler production on commercial scale in Balaghat district.

The list of 25 Broiler production unit were prepared and further categorised into two groups with the consideration of no. of birds viz 1st group 1000 to 2000 and 2nd group above 2001. From each group, five broiler units were selected randomly. Thus total 10 broiler production unit were considered for detailed investigation to fulfil the stated objectives. The marketing agencies (wholesaler) and retailers were also selected for collection of information related to marketing of broiler production.

The primary data in the study pertains to the year 2013-14. For estimation of cost and return, variable and fixed cost, net income and benefit cost ratio were used. Marketing cost and margin were also worked out at producer and different marketing agencies Levels in the study area. Broiler production and marketing constraint were also identified.

The findings of study area summarized below

- In Balaghat district, total 131 poultry unit (broiler farm) were established in the year2013-14. It was observed that the number of birds increased significantly for meat purpose during the last decade. Among the blocks of Balaghat district, highest numbers (25) of poultry unit in different size were present in Balaghat block which shows the favourable trade in the future.
- It was observed that under 1st and 2nd group, 80 and 100 per cent respondent were belonged to OBC group respectively in the study area and remaining comes under general category.

- The majority of sample respondent in both the group comes under 30-40 year which shows that young entrepreneur are involved in the poultry business in the study area.
- Under the 1st group of poultry owner, 3 person upto HSC, 1 up to middle and only 1 up to graduate level educated and near about same pattern was also observed in 2nd group.
- The average number of birds per cycle was estimated 1084 and 4164 in 1st and 2nd group respectively. The sample respondent of both group (poultry owner), maintain to run the poultry farm by five lot of birds in both the groups.
- On an average the total investment on fixed cost per birds was estimated to be Rs. 410 and 268.19 to maintain the poultry farm in 1st and 2nd group respectively.
- About 80 per cent capital was invested on poultry shed purpose by both the group and reaming 20 per cent capital was utilized for equipment and other items purpose.
- Among the feeding material, 57, 38, and 5 per cent funds are required for finisher, starter and pre starter feed respectively to maintain five lot of birds in both the group. On an average per bird per cycle feeding cost was estimated to be Rs. 68.
- Under variable cost, the expenses on feeding material and cost of day old chicks covers about 92 per cent under 1st group while in 2nd group the coverage of variable cost for feeding material and chicks was 86 percent. Overall it could be concluded that the average variable cost was estimated to be Rs. 285239.92 per cycle which covers 2624 number of birds under poultry farm in the study area.
- The average gross income per cycle from all the sources worked out to be Rs 164200 and Rs 604676 for 1st and 2nd group poultry farms respectively. About 99 percent share in the average gross income was covers from broiler production. Income from poultry manures by 2nd size group

received three times more than 1st size group it may be due to variation in numbers of birds in per cycle.

- On an average the net returns per cycle come to be Rs. 40121.77 and Rs. 141943.56 for the 1st and 2nd group respectively. As far as benefit cost ratio is concerned, on an average 1:1.31 ratio was observed and ratio was at par in both the group.
- The cost of production per broiler was found Rs. 112.98 and 109.91 under 1st and 2nd group of poultry farm in the study area. On an average the cost of production per bird was estimated to be Rs.111.445 in the study area.
- About 46 to 48 per cent broiler was purchased by Indian broiler and Simran marketing agency during 1st period (march-June). It could be concluded that highest percentage of broiler was sell out during 1st period followed by 3rd and 2nd period. Overall the Indian broiler agency purchased 65 and 70 per cent broiler from the producer in the 1st and 2nd group of poultry farm respectively. While other agency ie. Simran purchased only 35 and 30 per cent broiler which shows that poultry owner gives more preference to Indian broiler marketing agency for selling of broiler in the study area.
- Under 1st group, if the producer sell the broiler to Indian broiler agency then on an average they will get Rs. 4714 as marketing margin (profit) for 100 birds. While selling by other marketing channel through Simran agency than they will get Rs. 3947 as profit for 100 birds. Regarding 2nd group, sample poultry owners also sell out the broiler through 2nd marketing channel and over all received Rs. 4492 and 3580 as profit for 100 birds through Indian broiler and Simran agency respectively.
- It was observed that maximum (4800) margin was achieved by the producers during 3rd period followed by 2nd (4400) and

1st (4276) under 2nd group period. The Indian broiler (1150 to1400) and Simran marketing agency (950 to 1200) also received profit (margin) in both the channel as well as group and due to that they continue performed the poultry business.

- Over all it could be concluded that the major problem were observed poultry health, not availability of skilled labour and less number of marketing agency etc. So more efforts are required by the concerned agency to solve the problem than poultry business may be developed in more efficiently manners and it will be helpful to improved the income and employment opportunity in the study area.

6.3. Suggestions

Results and the discussion lead to following recommendations.

1. In poultry business protection of broiler (birds) from disease is the major problem so some protective measures should be specify by the veteran.
2. Efforts are needed by the concerned agencies to supply the feeding material without adulteration then up to some extent we can protect the broiler (birds) from infection.
3. In poultry sector less number of marketing agencies are involved in the study area and broiler market is still operating as unorganized way, its required to develop the poultry (broiler) market in organised way them producer may received remunerative price as well as facilities provided by the government agency.
4. Training should be organized by the some institution to train the person for running the poultry business efficiently and considered as profitable enterprise in the study area.

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APPENDICES

TITLE: "Economics Analysis of Broilers Production in Balaghat district of Madhya Pradesh."

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(1) General Information

a) Name of broiler poultry unit …….
b) Name of owner …..…….
c) Tehsil
d) Caste …… Age ……..
e) Education level ……..
f) Distance from nearest market and Name of Market ……...
g) Month and year of starting poultry farm ……..
h) Numbers of broiler birds……
i) System of raising ……
j) From where the broiler purchased……...
k) Hybrid breed name ……

(2) Information regarding Assets:

a. Building owned/ hired

S. NO.	Particulars	Type of building kaccha/pakka	Year of construction	Area covered (L*W)	Value (Rs.) original cost	Present value	Capacity (No's of Birds)
1	Brooder house						
2	Broiler house						
3	Store						
4	House for laboures						
5	Any other construction						

b. Inventory of machine and equipment.

S. No.	Name of machine and equipment	Number	Year of purchase	Original cost	Present value
1	Incubator				
2	Mover brooder				
3	Batteries				
4	Feed hoppers				
5	Chick boxed				
6	Shifting carates/cage				
7	Water pipe/ water nipple drinker				
8	Fencing				
9	Automation if any				
10	Other utensils				

c. Details regarding the size of poultry farm

S. No.	Name of breed	Number of birds for broiler Agewise (days)			Value (Rs.)		
1							
2							
3							

d. Quantity and cost of feed required for raising day-old chick upto its market age

S. No.	MONTHS	QUANTITY IN Kg			COST IN Rs		
		I	II	III	I	II	III
1	January						
2	February						
3	March						
4	April						
5	May						
6	June						
7	July						
8	August						
9	September						
10	October						
11	November						
12	December						

e. cost of per day old chicks

(i) Number ……. (ii) Cost (Rs.)…….

f . Mortality

g. human labour and supervision

(i) hired labour

1. Permanent labour Number……..
   Rates……Period…….
2. Casual labour Number…….
   Rates……Period ……

(j) Family labour

1. Physical work: Number……... Period……..
   1.
   2.
   3.

2. Cost of medicine & vaecine: Month
Cost in Rs.

1.
2.
3.

h. Miscellaneous expenditure

S. No.	Items	On Chicks (Rs.)	On Birds (Rs)
1	Cost of litter		
2	Repairs of bulding		
3	Repairs of equipment		
4	Water chargers		
5	Disinfection		
6	Other charges		

Expenses

a. Expenses:

S.NO.	No's of Birds	Quantity	Cost (Rs.)
1	10		
2			

b. Cost of medicine per year:

c. Electricity charges per year:

d: Miscellaneous cost per year:

(3) Information about marketing:

a. Mode of transportation cost/100 broiler

(i) Truck

(ii) Bus/ Tempo/Riksha

(iii)Railway

(iv)cycle

(v)other if any

b. Nature of procedure adopted for sale of broiler

(i) On live weight basis…..Weight at time of sale(Kg)……Value(per unit)……

(ii) Age basis……..

a) Age at time of sale

S. No.	**Age**	**Value(per unit)**
1	Like 6 month	
2		
3		

b)Selling method of broiler

Daily		**Weekly**		**Fortnight**		**Monthly**	
S.No.	Value	No's	Value	No's	Value	No's	Value

c. Marketing charges.

S. No.	**Cost items**	**Producer/ owner**	**Wholesaler**	**Retailer**	**consumers**
1	Labours charges				
2	Cage charges				
3	Market fees				
4	Transportation charges				
5	Other charges				

e. Production and marketing problem and suggestions:

1.Problems- (i) feed releted

(ii) labour

(iii)Chicks

(iv)Disease

(v) Availabilty of medicine

4. Information about receipt

a. Farm manure: Quantity…….. Value(Rs)……..

b. Broiler production

S. No.	Month	Total Production of Broiler	Family consumption of Broiler	No. Broiler sold	Rate

ABSTRACT

Title of the thesis	:	**"An economic analysis of Broilers Production in Balaghat District of Madhya Pradesh."**
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Abstract

This study has been undertaken in Balaghat district with the objectives to Know the Present status of broiler production of poultry farm, assess the cost of production of broiler production, measures the marketing cost and margin of broiler production under different marketing channel and identify the constraints in broiler production and marketing.

Balaghat block of Balaghat district was selected on the basis of large no. of poultry units of different size. Total 10 broiler production unit under two group were considered for detailed investigation.The marketing agencies (wholesaler) and retailers were also selected, to estimate the marketing cost and margin. The study pertains to the year 2013-14. For estimation of cost and return, variable and fixed cost, net income and benefit cost ratio were used. Marketing cost and margin were also worked out at producer and different marketing agencies Levels, Broiler production and marketing constraint were also identified.

Results shows that the average number of birds per cycle was estimated 1084 and 4164 in 1st and 2nd group respectively. The sample respondent of both group (poultry owner), maintain to run the poultry farm by five lot of birds in both the groups. On an average the total investment on fixed cost per birds was estimated to be Rs. 410 and 268.19 to maintain the poultry farm in 1st and 2nd group respectively. Overall it could be concluded that the average variable cost was estimated to be Rs. 285239.92 per cycle which covers 2624 number of birds under poultry farm in the study area. The average gross income per cycle from all the sources worked out to be Rs 164200 and Rs 604676 for 1st and 2nd group poultry farms respectively. On an average the net returns per cycle come to be Rs. 40121.77 and Rs. 141943.56 for the 1st and 2nd group respectively. As far as benefit cost ratio is concerned, on an average 1:1.31 ratio was observed and ratio was at par in both the group. The cost of production per broiler was found Rs. 112.98 and 109.91 under 1st and 2nd group of poultry farm in the study area. Under 1st group, if the producer sells the broiler to Indian broiler agency then on an average they will get Rs. 4714 as marketing margin (profit) for 100 birds. While selling by other marketing channel through Simran agency than they

will get Rs. 3947 as profit for 100 birds. Regarding 2nd group, sample poultry owners also sell out the broiler through 2nd marketing channel and over all received Rs. 4492 and 3580 as profit for 100 birds through Indian broiler and Simran agency respectively. It was observed that maximum (4800) margin was achieved by the producers during 3rd period followed by 2nd (4400) and 1st (4276) under 2nd group period. The Indian broiler (1150 to1400) and Simran marketing agency (950 to 1200) also received profit (margin) in both the channel as well as group and due to that they continue performed the poultry business. Over all it could be concluded that the major problem were observed poultry health, not availability of skilled labour and less number of marketing agency etc.

In this study it is suggested that in poultry business protection of broiler (birds) from disease is the major problem so some protective measures should be specify by the veterinarian. In poultry sector less number of marketing agencies are involved in the study area and broiler market is still operating as unorganized way, its required to develop the poultry (broiler) market in organised way them producer may received remunerative price as well as facilities provided by the government agency.