

## POULTRY FARMING IN A STRESS TRAJECTORY

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### ABSTRACT

Broiler poultry farming in India has a tremendous improvement from past decades due to the increasing demand, purchasing power of the consumers, adoption of various technologies and fast returns. Most of the farmers in India are uneducated. Most of the farmers are even not trained and the trained farmers are supposed to earn more profits than the non trained farmers. The broiler poultry farming in India is carried in two ways – self-farming and contract farming. Self-farming is a process where farmers alone take care of input procurement, rearing and marketing the output. Contract farming is where the input is provided by the integrators and output is also taken by the integrator, supervision is done by the integrator.

**KEYWORDS:** Broiler Poultry Farming, Self/Non-Contract Farming, Contract Farming, Challenges

### INTRODUCTION

Through archaeological discoveries, it was suggested that poultry farming was carried out by the people during the Indus valley period and was known that red jungle fowl was domesticated during the period 5400 B.C. (West and Zhou, 1988). Poultry farming in India till the 1950s is a backyard venture where people use to raise the native birds without any scientific practices. Later on, missionary organizations had introduced some exotic breeds and distributed these improved chicks to the farmers so that they can have an additional income. (Sasidhar and Suvedi, 2015). In India broiler bird was known from 1975 where chicken is “spenthens” or “male birds”. In 60 days these commercial broiler birds are ready for slaughtering and the meat used to be tender and these came as a separate entity after 1975. From then hatcheries had imported grandparents and parents of hybrid broilers this breeding operation has been started initially in Delhi and later it was shifted to South India. The hatcheries used to sell the day-old chicks to farmers, where farmers raise them and sold the produce to traders. This live broiler birds had become a separate entity in 10 years and these are not transported to long distances (Market News, 2016).

With an improvement in technology, there have been a tremendous change in broiler production in the field of genetics, breeder management, hatchery management, nutrition and disease management and the growing period of broilers came down to 40 days from 60 days. With an increase in the number of broiler growers, the industry shape was changed (Market News, 2016).

This also brought a change in academics where a poultry research section, Indian Veterinary Research Institute (IVRI) was established in 1939 at Izatnagar, in the year 1952 this section has become a full-fledged poultry research division. IVRI had introduced a three-month postgraduate certification course in 1950 and a nine month diploma program

named as the national diploma in poultry husbandry in 1960. In 1972 at IVRI with the help of United Nations Development Programme (UNDP) a Centre of excellence in poultry was established which was set up for postgraduates training to strengthen research and development in poultry (Shrivastava and Sasidhar, 2006; Sasidhar, 2009).

Central Avian Research Institute (CARI) in 1979 at Izatnagar and the Directorate of the poultry Research (DPR) in 1988 at Hyderabad is started by ICAR to progress the poultry production in India. Over a period of time in state agricultural universities and state veterinary universities, poultry science departments were established to offer graduate, postgraduates and doctoral programmes in poultry science. These departments had played an important role in the development of the poultry sector in India (Sasidhar, 2013).

In the 1940s a vaccine has been found against the disease Ranikhet and it also has a power to increase the immunity of birds and this led to commercial farming. In India's first five-year plan during 1951-56, another step was laid for commercial poultry farming with a pilot project launch in Orissa. This has been transformed into All India Poultry Development Programme during second five-year plan during 1956-61, and this had laid a foundation for modern poultry farming in India. With foreign collaboration, four multiplication farms were set up in the private sector for the production of exotic chicks which are capable of laying 240 eggs per year. For profitable poultry keeping, intensive poultry development projects were introduced to provide necessary inputs (Sasidhar and Suvedi, 2015).

India is the fourth largest producer in chicken meat production in the world after China, Brazil, and USA. With increasing population every year and increase in purchasing power of consumers in India, consumption of chicken meat is also increasing simultaneously. The employment opportunities in broiler poultry segment are increasing day by day as people are spending more money to get better food. The broiler production has been increased to 4.2 million tons per annum in 2015-16. The demand for processed chicken is also increasing at a rate of 15-20% per annum (Ajay and Ram, 2017).

Coming to broilers the feed constitutes 65% of the total cost and the chicks constitute 25% of total cost. Small-scale producers are mostly engaged in contract farming.

India had exported 6,59,304 million tones of poultry products in the year 2015-16 where the majority of exports are done to the middle east. Every year India exports 5000 million tones of poultry products to Germany, the Netherlands and Denmark.

Compared to layer production, broiler production has been more vibrant within the poultry sector as it has increased production of 0.980 million tons in 2000 to 4.600 million tons in 2018 (Index Mundi, 2018). Poultry production is accounting for about 0.66 percent of country's GDP and 7.72 percent GDP from the livestock sector (Prabakaran, 2014; Rajendran et al., 2014).

With regard to the employment about 80 percent of employment is generated from poultry farms whereas the rest of employment is through feed, medicines, equipment and other services related to poultry. Additionally, some are engaged in marketing and other channels. Organized poultry sector is contributing about 70% of total output whereas the remaining is contributed by the unorganized poultry sector. Within the poultry two-thirds of output is through the broiler sector and one-third by egg production (Sasidhar and Suvedi, 2015).

The growth of the broiler sector in India is phenomenal as earlier broiler farms produced an average of 200-500 chicks per cycle. The present scenario is units less than 5000 chicks are very rare and units with broiler chicks 10,000-50,000 are common. Even many small layers had shifted into broiler poultry farming as they are able to earn income within six weeks (Hemu, 2010).

**Table 1: Trends in broiler poultry production in India (1000 Tons)**

Year	Broiler Meat Production	Growth Rate (Percent)
2000	980	69.50
2005	1900	93.87
2010	2650	39.47
2011	2900	9.43
2012	3160	8.97
2013	3450	9.18
2014	3725	7.97
2015	3900	4.70
2016	4200	7.69
2017	4400	4.76
2018 (projected)	4600	4.55

Source: Index Mundi, 2018.

The five states which are in highest meat production are Uttar Pradesh, West Bengal, Maharashtra, Andhra Pradesh and Telangana (The daily records, 2018).

#### **Broiler Poultry Farming in India has Two Options**

- Non-contract broiler farming (NBCF)/ self farming: Where the farmer has to bear all the expenses such as procurement of chicks, feed, vaccines and medicines and also the farmer alone bear all the expenses such as labor charges, electricity charges, litter material and disinfects etc and even transportation of produce to retailers/wholesalers is taken care of the farmers. The farmer alone takes risks involved in investment, production, and marketing.
- Contract broiler farming (CBF)/integration: In this farming, the integrator provides inputs such as chicks, feed, vaccines and medicines to the farmers. The integrator takes care of transportation costs, investment risks, and marketing risks. The farmer has to take care of labor, electricity, poultry house, water, litter and any other miscellaneous services or equipment required. In this farming model, the working capital expenses are borne by integrators and the farmer role is to take care of the chicks and the farmer is paid according to the predetermined price which is listed in the contract. The integrator rewards the farmer for achieving the target at the same time the integrator also possesses a right to penalize the farmer if the agreed criteria are not met.

#### **NEED OF THE STUDY**

This study has been carried out to trace out the broiler production in India and its significance in providing employment and nutrition to the people of the country. Even though this industry generates revenue despite faces certain problems or challenges where the study tries to identify the problems faced by the both non-contract farmers and contract broiler farmers at various regions so that the outcome of the study can help to bring certain challenges into the light faced by the farmers in various regions so that certain policies can be framed or reframed which help in the growth and development of the industry.

## REVIEW OF LITERATURE

### Review of Non-Contract Broiler Poultry Farms

Bhardwaj et al. in their study “**Study of Cost Behavior and Marketing Margins in Poultry Production – A Case study of Broilers**”, published in *Indian Journal of Agricultural Marketing Conference Special*(1995), on cost behavior and marketing margins of broilers, identified that size of broiler farms has an influence on the cost of raising broilers and considering the marketing margins retailers are earning more profits than the producers.

Bhardwaj et al. in their study “**Study of Marketing Broilers in Haryana**”, published in *Indian Journal of Agricultural Marketing* (1996), tried to examine the reasons affecting the supply of broilers and observed that bird mortality and culling rate are the major reasons which are dependent on age of the bird and size of poultry farms. The cost incurred for broiler production decreases with increase in the size of a farm. The study also revealed that marketing practices are influenced by the size of the farms and seasons too.

Pandey et al. in their paper, “**Economic Study of Poultry Production in India**”, presented in *Proceedings of the 20<sup>th</sup> World Poultry Congress* (1996a), tried to understand the status of poultry production in India and analyze the behavior of production cost of poultry products in selected areas. The study revealed that poultry farming had become an important component of the farm economy as it is generating income and employment in the rural areas. When the production cost is analyzed by the researcher it was observed that two-thirds of production cost are constituted by feed alone.

Iqbaluddin in the study “**Poultry development policies and planning for higher production environmental production income and employment**”, which is *Proceedings of the 20<sup>th</sup> World Poultry Congress* (1996), states that in the poultry industry, the marketing system is controlled by private traders. Most of them are not attracted towards this sector due to frequent price fluctuations. The researcher also identified that out of 9 states where poultry industry is well developed only in two states i.e., Gujarat and Maharashtra the poultry cooperatives are doing well. The researcher also suggested that these poultry cooperatives should be extended to all other poultry producing states.

Bhende M.J. in the report “**Production and Cost of Broiler Meat – A Case Study of Karnataka, Agricultural Development and Rural Transformation Centre Institute for Social and Economic Change**”, (2006) tried to assess the profitability of broiler farms and constraints faced by the broiler poultry farmers. The researcher identified that inputs are not provided by the on time to the farmers by the service providers, low margins, and spurious feed is provided by the feed supplier, late payment is done by the retailers, high prices of raw materials and lack of credit facility by banks.

Gopala et al. in their study “**Constraints Analysis of Broiler Poultry Framing Under Contract and Non-contract Systems in Karnataka**”, published in *International Journal of Current Research* (2015), tried to identify the constraints faced by the non-contract broiler poultry farmers in the study area using Garrett’s ranking techniques and found that market price fluctuations, high mortality rate due to diseases, unavailability of chicks, no proper extension advisory services, and high electricity charges are the constraints faced by the respondents in the study area. The researcher suggested that if poultry marketing cooperative systems are strengthened then non-contract farmers can be benefited. The researcher also stated that if government control is present over main inputs like providing feed and electricity subsidies similar to agriculture farmers then the farmers can be benefited. For small and medium farmers both public and private banks should extend the financial support.

Satapathy et al in their study **“Economic Broiler Farming: Scope and Limitations”**, which was published in *Indian Farmer (2017)*, stated that poultry being a backyard venture had transformed itself into a commercial and fastest growing sector as the integrators extended their support. As broiler birds adapt to different climatic conditions and the employment opportunities are increases people are attracted towards broiler farming. Even though high profits are earned at the same time it has some constraints such as price fluctuation was a major constraint faced by the farmers while marketing the birds followed by price cutting and competition in the process of marketing the birds in the study area.

Amit Kumar Singh et al in their study **“Constraints in Contract and Non-contract Broiler Farming Systems in Eastern Plain Zone of Uttar Pradesh”**, published in *The Indian Journal of Veterinary Sciences and Biotechnology (2017)*, explored the constraints faced by the non-contract poultry farmers in the study area and found that frequent price changes, lack of organized marketing facilities, no support price policy and market price is unsatisfactory.

### **Review of Contract Broiler Poultry Farmers**

Vara Prasad et al in the study **“Problems in Contract Broiler Farming as Perceived by the Farmers”**, published in *The Indian Veterinary Journal (2005)*, tried to identify the problems faced by the contract farmers in the study area and found that the major constraint faced by the farmers in the study area is delay in providing chicks by the integrators.

Kalamkar through the study **“Inputs and Services Delivery System under Contract Farming: A Case of Broiler Farming”**, published in *Agricultural Economics Research Review (2012)*, tried to examine the constraints faced by the contract broiler poultry farmers in the study area and found that low growing charges, delay in providing inputs such as chicks and veterinary services, high visiting charges and the tax deduction at the source are the major issues faced by them.

Gopala et al in their study **“Constraints Analysis of Broiler Poultry Framing Under Contract and Non-contract Systems in Karnataka”**, published in *International Journal of Current Research (2015)*, explored that contract broiler poultry farmers are facing certain problems such as high mortality due to diseases, high electricity charges, lack of financial support, less quality of medicines and feed and inadequate extension advisory services.

Sridharan in the study **“Study on the Socio-Economic Characteristics of Contract Farmers Associated With Suguna Broilers in Coimbatore District”**, published in *International Journal of Business and Management Invention (2017)*, had revealed that less growing charges and high electricity charges are the major challenges of contract broiler poultry farmers in the study area. As integrators are giving less growing charges which are not sufficient for the contract farmers to meet the increasing expenses of coal, electricity and labor charges, the farmers are not satisfied due to this reason. The researcher suggests that the integrators should provide knowledge to the farmers regarding poultry production and marketing, as this increases morale in farmer and they will become loyal to the integrator.

Amit Kumar Singh et al in their study **“Constraints in Contract and Non-contract Broiler Farming Systems in Eastern Plain Zone of Uttar Pradesh”**, published in *The Indian Journal of Veterinary Sciences and Biotechnology (2017)*, tried to find out the challenges faced by contract broiler poultry farmers and find out that delay in providing inputs mostly chicks, less growing charges given by integrators, delay in lifting the produce and delay in providing veterinary services.

## OBJECTIVES

- To examine the growth pattern of broiler poultry industry in India.
- To understand the problems or challenges of non-contract broiler poultry farmers and contract broiler poultry farmers in various regions in India.

## METHODOLOGY

The study is done based on secondary data obtained from research publications, websites, and handbooks. Content analysis of the existing literature is used to understand the dimensions of problems faced by poultry farms and generalization are made.

### Challenges Faced by Non-Contract Broiler Poultry Farmers

From the various research publications, it was observed that non-contract broiler poultry farmers across the nation are facing difficulties such as:

#### Lack of Fund

The farmers who are carrying out the business on their own have to take care of the entire expenses incurred in procuring the chicks, feed, medicines, vaccines, labor charges, electricity charges, and other miscellaneous charges. Most of the studies revealed that as the cost of inputs is increasing farmers are suffering to procure them and could not even go for expansion of their poultry farm.

#### High Cost of Raw Materials

Feed alone constitute up to 65% of production cost and 25% of the cost is incurred for procuring chicks. The prices of feed and chicks fluctuate very frequently. At some time the prices are very high where the farmers are unable to invest in raw materials and the production is being stopped by many of the farmers due to this.

#### Low Marketing Margins

While selling the produce to wholesalers/retailers farmers are asked to sell the produce at the low price than the market rate due to which farmers are selling at the low price and they are not getting enough profits. Whereas the retailers and wholesalers are earning more profits than the farmers.

#### Lack of Poultry Co-Operative Societies

In many regions, poultry co-operative societies are not actively functioning. This is attracting the private players where the entire market is ruled by them. Due to which small and medium farmers are suffering to procure the input and sell the produce.

#### Lack of Credit Facility

Most of the studies revealed that farmers are not provided credit facility by banks. Most of the farmers are carrying out the business by taking credit from the informal sources whenever they require. Many researchers stated that credit facility should be provided to the broiler poultry farmers by the banks similar to that of agriculture farmers.

### **Price Fluctuations**

Many researchers in the study stated that farmers are suffering from frequent price changes where at some time the investment is too high and while they are selling the produce they are not able to get back the amount which they had invested to retailers bargaining power. Some researchers also stated that there is no support price policy present because of which the farmers are getting huge losses.

### **Challenges Faced by Contract Broiler Poultry Farmers**

#### **Low Growing Charges**

Many studies which are done to identify the problems/challenges faced by the contract broiler poultry farmers came out stating that farmers are suffering from the less growing charges given by the integrator and due to which the farmers are unable to meet certain expenses such as cost of coal, electricity charges, labor charges, and other miscellaneous charges.

#### **Delay in Providing the Inputs**

In some studies, it was observed that farmers are not given inputs on time due to which the expenses for the farmer increase as the farmer has to pay for electricity and labor etc. which automatically decreases the number of batches produced in a year by the farmer.

#### **Lack of Financial Support**

Contract broiler farmers are not getting any kind of financial support from the banks or government. Due to which at times they also borrow funds from the informal sources and invest in the business.

#### **High Mortality Rate Due to Diseases**

Through some studies, it was known that the mortality rate of chicks is high due to flock getting affected with diseases. In this case, the farmers are suffered as the integrators cut down the payment.

### **CONCLUSIONS**

From the above study, it was identified that both in non-contract and contract broiler poultry farming government intervention is not present because of which the entire market is been in the hands of private players. Even though the government had introduced certain policies, farmers are not aware of them. The government has to take an initiative such that the policies framed especially for the broiler poultry farmers should be communicated and also the government has to take care in fixing minimum support pricing policy by appointing a committee so that the farmers are safeguarded without experiencing huge losses. Banks should consider the poultry farming as an agriculture segment and should provide credit to the farmers such that production is not interrupted for the farmer. Coming to contract broiler poultry farmers' integrators should increase the growing charges for the farmer considering the increase of prices in the market. The inputs should be provided on time to the farmer and certain suggestions and training should be given to the farmer where the farmers get motivated with this and they will not change the integrator.

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