



# **HARYANA POULTRY FARMING: GEOGRAPHICAL ORGANISATION AND SOCIOECONOMIC FACTORS**

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## **ABSTRACT**

The consistently decreasing income of farmers in India has resulted in an ongoing crisis in the agriculture sector. It is possible that one of the most important factors in overcoming this problem is the diversification of the rural economy through the promotion of agribusinesses such as broiler farming. The purpose of this study is to analyse the trends that emerged throughout the first two decades of the 21st century about the progression of broiler farming in Haryana. The basic data for this study came from a field survey administered to 175 broiler farmers in the districts of Bhiwani, Kurukshetra, Karnal, Jind, and Mahendergarh. These districts are included in the scope of this research. The socio-economic characteristics of broiler farms in the state have been investigated with regard to the social status (caste groups), economic position, and educational status of the broiler farmers in the state. For the past decade, from 2007 to 2017, the number of broiler farms in this state has increased by 71 percent, making it one of the fastest growing in the country. According to the findings of the analysis, landowning castes with moderate to large landholdings predominate in the broiler farming industry. The majority of farmers that raise broilers are large-scale chicken producers who belong to landowning castes. The economic productivity of their farms is also higher than that of smaller farmers. The degree of education that broiler farmers possess also has a substantial influence on the amount of profit that they make.

**Keywords:** *Broilers, Marketing, Input, Output, Agri-business.*

## **INTRODUCTION**

In recent years, raising broiler chickens for meat has become one of the most lucrative forms of animal husbandry in India. This agricultural enterprise is carried out in big broiler farms as well as in small poultry farms for the purpose of large-scale commercial production and sale of broiler meat. The purpose of both types of farms is to produce broiler meat. A broiler breed chicken is a little bird that grows in a period of 5 to 6 weeks and has bones that are flexible. The farming of broilers does not require a very large initial investment, increases extremely quickly, and yields profits in as little as six weeks (Indria, 2018).

People are able to get the nourishment they need from broiler meat because to its high-quality protein and many micronutrients (Neumann et al., 2002). Because broiler chicken meat is becoming more widely accepted in India's cities, towns, and villages, broiler farming has become a rapidly expanding subsector of the poultry industry there. Both the demand for and the amount of broiler chicken consumed have been on the rise at a rapid pace. Over the course of the past several years, backyard poultry farming has evolved into one of the business sectors with the fastest rising market share (Reddy, 2015). India is the country that has been in the

forefront of the development of commercial poultry production in South Asia (Prabhakaran, 2003). Research has shown that returns on capital investment are highest in broiler farming when compared to other kinds of animal agriculture (Singh et al., 2010).

The rapid expansion and growth of the poultry farming industry have brought about major improvements in the economics of rural developing countries (Mack et al., 2005). The poultry industry in India has been driven by rising incomes and the establishment of vertically integrated poultry agri-businesses. The major changes in the poultry economy in India have taken place during the post-liberalization period, with the opening of the world market and incentives given by the government to the farmers to take up this agri-business (Landes et al., 2004). Contract farming and non-contract farming are the two primary approaches that are utilised in the commercial production of broilers. Under the terms of contract farming, the contractor is responsible for providing extension services and inputs, as well as bearing the cost of transportation and the risks associated with investment and marketing. While it is the responsibility of the contract farmer to provide labour, a shed, electricity, water, and trash material, as well as any other ancillary services. In farming arrangements when there is no contract between the parties, the broiler farmer is responsible for bearing all of the costs associated with the purchase of chickens, feed, medications and vaccinations, as well as overhead farm expenditures and transportation. The farmers are the ones who are responsible for bearing all of the risks associated with investment, production, and marketing.

The business of raising broilers has, for the most part, been examined and depicted from a commercial and economic point of view (Kiran and Rao, 2013). The cost-benefit analysis has been the primary focus of much of the research done on this agricultural enterprise (Chhikara, 1989). As a result, the purpose of this study was to make an effort to comprehend the industry of broiler farming in Haryana from a geographical viewpoint by concentrating on its beginnings, the spatial organisation of the industry, and the socioeconomic features of broiler farmers.

## **OBJECTIVES OF THE STUDY**

1. To analyse the socio-economic attributes of broiler farmers with respect to their social, economic, and educational status
2. To trace out the evolution of broiler farming and its spatial distribution pattern in haryana

## **RESEARCH METHODOLOGY**

The current study made use of both primary and secondary sources of information. The primary data were collected by a field survey of 175 broiler farmers in 2013 from the districts of Bhiwani, Kurukshetra, Karnal, and Mahendergarh, which had a larger number of broiler farms than other districts. 35 farms were chosen at random from each district. The office of the Department of Animal Husbandry and Dairying in Panchkula provided the secondary data that was obtained, and it related to the number of broiler farms that were located inside each district (Haryana). Data have also been obtained from non-government organisations, such as Skylark Hatchery Pvt. Ltd. in Jind, Kissan Hatchery Farms in Gangoli, and North Zone Broiler Association Safidon in Jind.

The farmers who raise broiler chickens have been divided into three distinct caste categories: upper castes, which include the Brahmin, Vaishya, and Rajputs; landowning castes, which include the Jat, Jat Sikh, Ror, and Ahir; and other castes (Lohar, Khati, Balmiki and Muslim castes). In order to have a better understanding

of the economic standing of broiler farmers, they have been categorised according to the size of their landholdings as follows: small (up to 2 ha), medium (2-4 ha), big (4-6 ha), and very large (above 6 ha). On the basis of their levels of education, the farmers of broiler chickens have also been classified into the following categories: illiterate and below primary; primary and middle; matriculating; senior secondary; and graduates and above.

In order to prepare a proximal position map of broiler farms in Haryana for the years 2007 and 2017, ArcGIS 9.3 was utilised. The yearly feed cost, labour cost, cost of broiler, energy cost, transportation cost, farm rent cost, medication cost, and other costs were added together and then divided by the number of chickens produced to get the input cost per bird. It has been determined that the yearly output of chicken may be acquired by multiplying the annual production of chicken by the price that has been obtained. The yearly production was divided by the total number of chickens that were produced on the farm during the year in order to calculate the output per bird. It has been determined how much money farmers make by calculating their inputs and outputs.

## RESULTS

During the years after the economic liberalisation, the commercial broiler farming industry in Haryana went through a period of rapid expansion. In the immediate region of the national capital territory, a group of forward-thinking merchants and farmers pioneered broiler farming. Nevertheless, the practise quickly spread to other parts of the country. When 2007 rolled around, there were 1289 broiler farms; ten years later, in 2017, that number had climbed to 2202. (Table 1). In 2007, Mahendergarh was the leading district with 158 broiler farms, followed by Yamunanagar (140) and Karnal (133) districts respectively. Nevertheless, as of 2017, the district of Bhiwani has the biggest number of broiler farms (322) in the state of Karnal, followed by the district of Kurukshetra (257). Despite the absence of any clear geographical trend, the majority of the state's broiler farms are located in the north-central and western regions of the state. Significant concentrations of broiler farms may be found in the districts of Karnal, Yamunanagar, Jind, and Bhiwani in the Indian state of Haryana.

## GROWTH OF BROILER FARMS

Over the span of time between 2007 and 2017, there was a 71% rise in the number of farms that raised broiler chickens (Table 1). A extremely high growth rate of 614 percent was observed in the district of Kurukshetra, which was closely followed by the district of Bhiwani (600 per cent). Both the Jhajjar and Mewat districts have grown at a faster pace than the 71% rate that is considered to be the average for the state. Other examples are Panipat, Sirsa, Jind, Karnal, and Hisar.

**Table 1 Haryana: District-wise Number and Growth Rate of Broiler Farms**

Districts	Number of Broiler Farms		Growth Rate (per cent)
	2007	2017	
Ambala	56	79	41.07
Bhiwani	46	322	600.00

Faridabad	06	08	33.33
Fatehabad	66	51	-22.73
Gurugram	35	35	00.00
Hisar	98	155	58.16
Jhajjar	13	32	146.15
Jind	85	188	54.79
Kaithal	104	107	2.88
Karnal	133	204	53.38
Kurukshetra	36	257	613.89
Mahendergarh	158	172	8.86
Mewat	28	52	85.71
Palwal	DNA	DNA	DNA
Panchkula	06	10	66.67
Panipat	45	68	51.11
Rewari	63	66	4.76
Rohtak	14	15	7.14
Sirsa	73	121	65.75
Sonipat	84	105	25.00
Yamuna nagar	140	155	10.71
Total	1289	2202	70.83

districts that have also showed exceptional expansion of broiler farms, which is defined as growth of more than fifty percent but lower than the norm for the state. In the districts of Kaithal, Rewari, Mahendergarh, and Gurugram, there has been a discernible but insignificant rise in the number of broiler farms. The district of Fatehabad reported a growth rate that was 23% below the national average. There does not appear to be any clear trend in the proliferation of broiler farms around the globe.

## **SOCIO-ECONOMIC PROFILE OF BROILER FARMERS**

It appears that raising broilers is not very popular with those belonging to higher social castes, since only 13.7% of all broiler farms are held by those individuals.

upper castes (Table 2). Castes that own land exercise the most influence in this society. Around four out of five people who raise broilers are members of landowning castes. The number of people who raise broilers from other castes is rather low (8.5 per cent). The broiler farming industry is dominated by medium farmers. They make up roughly 42% of the total number of farmers that raise broilers, coming in third after big and small farms. Roughly a quarter of the farmers that raise broilers are considered to be major farmers. Whereas the remaining 13% of broiler farmers are considered to be extremely large farms. Small farmers account for approximately one-fifth of the overall number of broiler farms. According to the findings of this study, the majority of farmers who raise broilers live in poor conditions.

**Table 2 Haryana: Number of Broiler Farms by Socio-economic Status of Farmers**

Social Status		Economic Status		Educational Status	
Upper Castes	24 (13.70)	Small Farmers	38 (21.70)	Illiterate and Below Primary	32 (18.30)
Landowning Castes	136 (77.70)	Medium Farmers	73 (41.70)	Primary and Middle	51(29.10)
Other Castes	15 (08.50)	Large Farmers	42 (24.00)	Matriculation	36 (20.60)
-	-	Very Large Farmers	22 (12.60)	Senior Secondary	25 (14.30)
-	-	-	-	Graduate and above	31 (17.70)
Total	175 (100.00)	Total	175 (100.00)	Total	175 (100.00)

educated, with 29 percent having completed elementary and intermediate levels of education and another 18 percent having not completed primary levels of education or being illiterate (Table 2). Around one-fifth of broiler farmers have completed their matriculation, and approximately one-third of broiler farmers have completed their senior secondary school or above.

### PHYSICAL CAPACITY OF BROILER FARMS

The number of broiler chickens that can be raised on a farm on an annual basis is what is meant by the term "physical capacity" of a broiler farm. According to the data in Table 3, about one-third of farms have medium annual capacity (30001-60000 chickens). The capacity of big and very large farms accounts for the remaining 45.14 percent of farms (above 60000 chickens). There are only 16% of farms with a capacity of less than 1,000 animals (up to 30000 chickens). There are around 42 percent of upper caste farmers who operate broiler farms with a capacity of medium size, while only 16.67 percent of their farms have a capacity of big size. This indicates that members of higher castes are more likely to hold farms with medium and large capacities. The classes that owned land were the ones that contributed the most to broiler farming. Around 77 percent of

the total broiler farms are classified as belonging to these castes. Almost half of the farms owned by landowning castes have capacities of either huge or very large, while 37% have capacities of either large or medium size. The average number of broiler farms in the state has a capacity of 68754 birds per year.

chickens. It has been shown that landowning castes have the most ability for farming (71750 chicks), while other castes have the least (41400 chickens).

It is clear from looking at Table 3 that the majority of small farmers operate broiler farms with capacities ranging from small to medium. On the other hand, a significant number of big and very large farmers operate broiler farms with capacities that are large and very large respectively. The vast majority of medium-sized farms raise broilers with capacities of medium or more. On the other hand, about 87 percent of small farmers run broiler farms with capacities ranging from tiny to medium. In general, the capacity of broiler farms was shown to be highest among extremely big farmers (12 1681 chicks), while it was found to be at its lowest among tiny farmers (36447 chickens).

A person's level of education does not play a role in the capability of their broiler farming operation. It is interesting to note that around 47% of big capacity broiler farms are owned by people with educational levels below basic school (Table 3). Almost half of the farms that are held by people with elementary or middle school education are considered to have a medium capacity. The majority of farmers who have completed their secondary school and continue on to further education operate broiler farms with capacities ranging from modest to big. There does not appear to be any discernible difference in the production capabilities of broiler farms based on the educational levels of the farmers.

**Table 3 Haryana: Annual Capacity of Broiler Farms by Socio-economic Status of Farmers.**

Status	Farm Capacity (Number of Chickens)					
	Up to 30000 (Small)	30001- 60000 (Medium)	60001- 90000 (Large)	Above 90000 (V. Large)	Total	Average
<b>Social Status</b>						
Upper Castes	02 (08.33)	10 (41.67)	08 (33.33)	04 (16.67)	24 (100.00)	68875
Landowning Castes	21 (15.44)	50 (36.76)	40 (29.41)	25 (18.38)	136(100.00)	71750
Other Castes	05 (33.33)	08 (53.33)	02 (13.34)	00 (00.00)	15 (100.00)	41400
Total	28 (16.00)	68 (38.86)	50 (28.57)	29 (16.57)	175 (100.00)	68754
<b>Economic Status</b>						
Small Farmers	17 (44.74)	16 (42.10)	05 (13.16)	00 (00.00)	38 (100.00)	36447

Medium Farmers	09 (12.33)	40 (54.79)	19 (26.03)	05 (06.85)	73 (100.00)	57479
Large Farmers	01 (02.38)	09 (21.43)	16 (38.09)	16 (38.10)	42 (100.00)	88690
Very Large Farmers	01 (04.55)	03 (13.64)	10 (45.45)	08 (36.36)	22 (100.00)	121681
<b>Total</b>	<b>28 (16.00)</b>	<b>68 (38.86)</b>	<b>50 (28.57)</b>	<b>29 (16.57)</b>	<b>175 (100.00)</b>	<b>68474</b>
<b>Educational Status</b>						
Illiterate and Below Primary	05 (15.63)	04 (12.50)	15 (46.87)	08 (25.00)	32 (100.00)	73125
Primary and Middle	08 (15.69)	25 (49.02)	10 (19.61)	08 (15.68)	51 (100.00)	66058
Matriculation	06 (16.67)	18 (50.00)	09 (25.00)	03 (08.33)	36 (100.00)	63416
Senior Secondary	03 (12.00)	09 (36.00)	08 (32.00)	05 (20.00)	25 (100.00)	71120
Graduate and Above	06 (19.35)	12 (38.71)	08 (25.81)	05 (16.13)	31 (100.00)	68483
<b>Total</b>	<b>28 (16.00)</b>	<b>68 (38.86)</b>	<b>50 (28.57)</b>	<b>29 (16.57)</b>	<b>175 (100.00)</b>	<b>67960</b>

## PERIOD OF BROILER FARM ESTABLISHMENT

In the 1990s, Haryana began to see the installation of broiler farms across the state. Around one-fourth of farms were formed prior to 1995, while another twenty-nine percent were brought into existence during the years 1996 and 2000. (Table 4). Around 24 percent of the broiler farms in the country were started by farmers between the years 2001 and 2005. Just 22 percent of broiler farms were established after the year 2005. However, throughout the most recent time period, there has been a reduction in the number of broiler farms that have been established. The upper castes were the ones who took the initiative, since around 38 percent of their farms had been developed by the year 1995. In subsequent times, however, landowning castes have become more numerous and have outnumbered higher castes. The second part of the 1990s saw the establishment of the majority, or 31%, of broiler farms that were held by landowning classes. By the year 2000, members of other castes began engaging in this agricultural enterprise. In general, castes that owned property were more successful in the during the course of history, ownership of broiler farms.

Large and extremely big farmers were the ones that took the initiative to begin broiler farming in the beginning, which lasted up until 1995. Up to the year 1995, around 50 percent of large farmers and 41 percent of very large farmers have become involved in this agri-business (Table 4). In the years 1996 and 2000, both large and small farmers began raising broilers for their own use. At the moment, farmers with medium-sized operations are the most prevalent in the broiler industry, followed by those with big and small operations. Farmers who have not completed elementary school, farmers who have completed primary school, and

farmers who have completed middle school are prevalent in the establishment of broiler farms in Haryana. Throughout the years 1996-2000, however, educated farmers had a preeminent position in the creation of broiler farms. There is no discernible difference in the adoption of broiler farming among farmers with various levels of educational attainment.

## CONCLUSION

Broiler farming has been rapidly expanding in Haryana, with most of the new farms being established in the state's north-central and western regions. From 2007 to 2017, there was a 71% rise in the number of broiler farms, with the district of Kurukshetra recording the greatest growth rate, followed by the district of Bhiwani. Landowning castes in Haryana are the most prevalent participants in the broiler farming industry. The majority of broiler farms are owned by large and medium-sized farmers. Yet, the level of education possessed by the proprietors of broiler farms does not have any particular bearing on this connection. Broiler farms that belong to landowning castes and extremely big farmers tend to have a better physical capacity than those belonging to other groups of farmers. There has not been a discernible shift in the capacity of broiler farms as a result of the varying educational levels of the farmers. Up until the year 1995, landowning castes held the majority of leadership positions in the establishment of broiler farms. But, since that year, upper castes no longer have this position. In a similar vein, really big farmers were the ones who pioneered the establishment of broiler farms in the beginning, but at this point, medium size farmers are the ones who are in the driver's seat. In addition, the majority of farmers with less education get their start in broiler farming first, while those with higher education come in at a later date.

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