

Constraints in Broiler Poultry Farming in Indian Punjab

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Abstract

Lagging of agriculture in providing sufficient surplus to the farmers opened the doors for the allied sector and poultry farming has emerged as one of the major contributors. Although poultry production reaping economic and social benefits remains unabated but the constraints faced by the farmers during and after the production process creates hinderances in making it the most remunerative business. The present paper aims to throw light on the problems faced by the broiler poultry farmers in the Punjab state. The study has been conducted with the heads of broiler poultry farmers selected using a three stage stratified random sampling. A sample of 338 broiler poultry farmers has been collected from the top Eight districts of Punjab as it covers three-fourths of the bird population. Descriptive analysis has been conducted to estimate frequencies and percentages of the responses. On the production side, farmers have faced the major constraint of expensive feed, day old chicks and vaccines, exploitation by the companies, shortage of skilled labour, lack of improved breeds, low quality feed, costly labour, uneasy availability of finance (loan), lack of government support and cultural & religious barriers in undertaking the broiler poultry farming operations. In case of health constraint, among diseases, Chronic Respiratory Disease (CRD) is the most common disease, followed by underweight as well as overweight chickens and untimely veterinary service. There is existence of that affects the supply conditions in poultry farming.

Keywords: Feed, Day Old Chicks, Barriers, District and Broiler Poultry Farmer

Introduction

Every economy normally shift from agriculture to industry and then to service sector. But India witnessed premature deindustrialization as it directly jumped from agriculture to service sector. So, the contribution of agriculture sector cannot be neglected. Agriculture has been a dominant sector absorbing a

large proportion of workforce thereby, driving economic growth in nearly every country and India is no exception. The primary sector is the backbone of Indian economy as it is contributing a substantial portion to the national income of the country. With the passage of time, the agriculture sector has reached at a saturation level imposing a ceiling on the employment opportunities, thereby exhausting the capacity of generating higher levels of revenue. This paves the way to explore the opportunities in the non-farm sector that can contribute in the GDP of the country at large and benefit its people at particular in terms of income and employment.

In the non-farm sector there are various opportunities in apiculture, pisciculture, pork farming, cattle farming, poultry farming, dairy farming but over the past few decades, among the livestock sector, in India, poultry farming is not only contributing in GDP of the nation and in providing employment but also has the potential to eradicate poverty, as a large number of poor households living in rural areas depend on poultry to fulfil their daily requirements. Moreover, poultry eggs and meat are the cheapest source of food having high content of proteins and nutrients, pushing up the demand for these two products worldwide (Khan, 2004 & Ali, 2007). Chicken meat contains low fat content and sufficient amount of iron and zinc, thereby making it an excellent food for pregnant women.

Poultry industry can be undertaken for the production of eggs and meat. Those involved into production of eggs are operating layer farms and those into production of meat are handling broiler farms (Archaria, 1990). The production of crops has been increasing at a rate of 1.5 to 2 per cent annually, while egg and broiler production has been growing at a rate of 8 to 10 per cent per year. Consequently, India has become the world's eighteenth largest producer of broilers and the fifth largest producer of eggs (Mehta et al., 2003). In the report of Hilmi et al. (2011), poultry farming extends help to the rural section of the society in a plethora of ways. These are as follows:

- **Poultry at a Household Level:** Poultry farming is a continuous source to provide suitable food items, say eggs, meats, and other products for home usage such as down and feathers, which may be used in pillow making; chicken waste (manure) can be used to fertilise the home and increase yields; by-products such as egg shells provide nutrition if fed to other farm animals like pigs etc.
- **Advantageous to the Farming Community:** Poultry can easily be integrated into local farming systems. Usually, the poultry birds are left for scavenging, especially after the crop harvest time. Poultry serves agriculture as it recycles nutrients from crop waste and returns them to the soil. Poultry manure is also used as a fertiliser to grow crops, which, in the future, poultry will use as feed for the birds.

- **Food Security:** Poultry farming has been expanding in terms of both scale and output due to increased production and enhanced marketing efforts. This has led to lower prices and broader distribution of benefits in terms of food availability, making improved nutrition accessible to more people and significantly contributing to food security.
- **Health and Nutrition:** In developing countries like India, where a significant portion of the population suffers from undernutrition, poultry products such as eggs and meat can help meet the nutritional needs of farm families, promoting better overall health and contributing to food security.
- **Enhancement in Income Level:** Poultry farming has opened a new business opportunity to raise the level of income for all sorts of marginal, small, medium, and large farmers. It has benefitted both the agents of the economy, i.e., consumers and producers.
- **Poultry as a Subsidiary Occupation for Savings:** Agriculture is not able to reap greater revenue for the farmers, which means they have very little or no savings. Rearing of livestock solved this problem to a considerable extent. Similarly, poultry can also be taken up by the saving motive as it acts as a savings account.
- **Gender Development:** Poultry venture is not gender biased as both men and women have equal and easy accessibility to this venture. It will further provide income security to women, less dependency on males and will raise them politically. Poultry products, especially eggs, generate regular income for women to run day-to-day household expenditures more efficiently and smoothly.

Although poultry farming provides both economic and social benefits to the farmers, yet the problems faced by the broiler poultry farmers during its operation are countless. Farmers face the problem of high cost of feed, day old chicks and vaccines, exploitation by the companies, shortage of skilled labour, lack of improved breeds, low quality feed, costly labour, uneasy availability of finance (loan), untimely supply of day old chicks, lack of government support in the broiler poultry farming operations, frequent price fluctuations, internal and external competition, exploitation by intermediaries, delay in collection of sale proceeds, transportation problems, cultural & religious barriers, problem of diseases, underweight as well as overweight chickens and untimely veterinary service which cause major health issues.

Broiler poultry farmers faced the constraint of diseases causing the mortality of chickens, followed by improper vaccinations, change in climate, improper brooding, improper health check-ups and improper litter management. Maximum chances of mortality occur in the first week of the rearing period and in summer season due to enormous rise in temperature.

Chronic Respiratory Disease (CRD) and Coccidiosis disease is the most frequent one among the broiler chicks (Goel and Toor, 2023). The present study has been carried out to evaluate the problems faced by broiler poultry farmers engaged into both contract and independent farming systems.

Research Methodology

The sample size has been determined on the basis of the information given by Department of Animal Husbandry in their annual report of 2019-20 regarding the total number of broiler poultry farms operating in the 22 districts of Punjab. An overall sample of 338 broiler poultry farms has been taken. In Punjab, almost three-fourths (75.35 per cent) of the broiler bird population is concentrated in the top Eight districts of Hoshiarpur, Gurdaspur, Sangrur, Ludhiana, Patiala, Pathankot, Jalandhar and Rupnagar only. Moreover, approximately three-fourths (77.27 per cent) of the broiler poultry farms are also operating in these top Eight districts.

Table 1: DetailsofSelectedBroilerPoultryFarms

Districts	No. of Poultry Farms
Gurdaspur	67
Hoshiarpur	86
Jalandhar	13
Ludhiana	28
Pathankot	48
Patiala	34
Rupnagar	24
Sangrur	38
Sampled from Punjab	338

Source: Primary Survey, 2022.

Therefore, taking into consideration the large number of broiler population and poultry farms in these top Eight districts, i.e. Hoshiarpur, Gurdaspur, Sangrur, Ludhiana, Patiala, Pathankot, Jalandhar and Rupnagar, these eight districts have been selected out of the total 22 districts in Punjab in the sample, based on the high concentration of poultry birds. From these chosen sampled districts, 15 per cent of the total poultry farms dealing in broiler production from each chosen district have been taken on the basis of probability proportional to size sampling. All the districts have been used as the universe; the selected 8 districts have been used as the first stage unit, the blocks have been used as the second stage unit and the farmers who raise broiler chickens have been used as the final stage unit of the sample. The choice of districts also covers the spread of Punjab state. Data has been

gathered from the chosen broiler poultry farmers through in-person interviews. The details of the sample collected has been presented in the Table 1.

Results and Discussions

The present study has explored various kinds of problems faced in broiler poultry farming of Indian Punjab. Farmers face numerous problems during the rearing period of the chickens termed as production constraints. Since, in the broiler poultry farms, live birds are reared, farmers have to face the constraints of health issues among the flocks. Various diseases have also been reported in the present study along with the cultural and religious barriers.

Production Problems

Production problems are the constraints faced by the broiler poultry farmers which hinders the process of production and are directly or indirectly associated with it. Table 2 shows the production problems faced by the sampled broiler poultry farmers across the state of Punjab. The study shows that a majority, that is, 260 (76.9 per cent) farmers bear the major constraint of expensive feed, followed by expensive day old chicks since 47 (13.9 per cent) farmers reported this problem. 41 (12.1 per cent) farmers have been exploited by the companies, 37 (10.9 per cent) finding the prices of vaccines exorbitant, 31 (9.2 per cent) facing the shortage of skilled labour since undertaking poultry operations is scientific process of brooding, housing, rearing, feeding, poultry farm management and marketing which requires skilled man force. Lack of improved breeds and low quality feed is cited by 24 (7.1 per cent) and 23 (6.8 per cent) farmers respectively. Equal proportion of farmers 22 (6.5 per cent) farmers have been experiencing the problem of costly labour and uneasy availability of finance (loan). Untimely supply of day old chicks leads to extra cost as 21 (6.2 per cent) farmers have reported this and 12 (3.6 per cent) farmers feel that there is lack of government support in promoting the welfare of broiler farmers by providing cheap raw materials and other facilities. The results of the present study are consistent with the findings of Rajendran & Mohanty (2003); Malarvizhi & Geetha (2015); Ganesh (2019) as they have found that feed costs have been higher. In the studies of Rajendran & Mohanty (2003); Kumar et al. (2019); Nayak et al. (2020), it has been found that broiler poultry farmers bear the problem of expensive medication.

Table 2: Production Problems

Districts	Production Problems																						Sampled
	High Cost of Feed		High Cost of Chicks		Exploitation by Companies		Costly Vaccination		Shortage of Skilled Labour		Lack of Improved Breeds		Low Quality Feed		High Cost of Labour		Finance Problem		Delay in Providing Chicks		Lack of Govt Effort		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Hoshiarpur	60	69.8	11	12.8	11	12.8	6	7.0	12	14.0	9	10.5	11	12.8	5	5.8	2	2.3	5	5.8	1	1.2	86
Gurdaspur	57	85.1	8	11.9	3	4.5	2	3.0	2	3.0	3	4.5	4	6.0	5	7.5	7	10.4	1	1.5	4	6.0	67
Pathankot	32	66.7	8	16.7	9	18.8	9	18.8	1	2.1	4	8.3	6	12.5	0	0.0	5	10.4	3	6.3	3	6.3	48
Sangrur	27	71.1	8	21.1	3	7.9	8	21.1	3	7.9	3	7.9	1	2.6	6	15.8	2	5.3	6	15.8	2	5.3	38
Patiala	30	88.2	4	11.8	1	2.9	4	11.8	2	5.9	3	8.8	0	0.0	2	5.9	2	5.9	4	11.8	0	0.0	34
Ludhiana	27	96.4	2	7.1	3	10.7	3	10.7	1	3.6	1	3.6	0	0.0	1	3.6	3	10.7	1	3.6	0	0.0	28
Rupnagar	14	58.3	4	16.7	7	29.2	5	20.8	6	25.0	1	4.2	1	4.2	0	0.0	1	4.2	1	4.2	2	8.3	24
Jalandhar	13	100.0	2	15.4	4	30.8	0	0.0	4	30.8	0	0.0	0	0.0	3	23.1	0	0.0	0	0.0	0	0.0	13
Punjab	260	76.9	47	13.9	41	12.1	37	10.9	31	9.2	24	7.1	23	6.8	22	6.5	22	6.5	21	6.2	12	3.6	338

Source: Primary Survey, 2022.

Moreover, in the studies undertaken by Rajendran & Mohanty (2003); Nagaraja (2014); Oladeji (2019); Islam et al. (2019); Kumar et al. (2019); Nayak et al. (2020), it has been found that broiler poultry farmers bear the problem of low quality feed quality. Islam et al. (2019), have pointed out that availability of finance is the major obstacle in smooth production whereas Mohankumar (2015); Ganesh (2019) have found shortage of skilled labour as the constraint.

Across the districts, the major constraint of expensive feed has been reported by all the farmers living in Jalandhar, after that in Ludhiana (96.4 per cent) and Patiala (88.2 per cent) districts whereas expensive day old chicks has been reported highest in Sangrur (21.1 per cent) and equally (16.7 per cent) in Pathankot and Rupnagar districts. Around 30 per cent farmers living in Jalandhar and Rupnagar have been undergoing the problem of exploitation by the companies, whereas the problem of exorbitant prices of vaccines is reported more by the farmers of Sangrur (21.1 per cent) and Rupnagar (20.8 per cent) districts. The higher proportion of farmers in Jalandhar (30.8 per cent) district have bore the problem of shortage of skilled labour whereas the farmers of Hoshiarpur (10.5 per cent) and Patiala (8.8 per cent) districts have been relatively higher reporting the issue of lack of improved breeds.

Low quality feed is the major problem among the farmers of Hoshiarpur and Pathankot districts as around 12 per cent each there have reported this. More number of farmers in Jalandhar (23.1 per cent) and Sangrur (15.8 per cent) districts bear the problem of costly labour whereas the farmers of Gurdaspur and Pathankot (10.4 per cent) districts face the lack availability of finance (loan), followed by the farmers of Sangrur (15.8 per cent) and Patiala (11.8 per cent) districts facing the constraint of untimely supply of day old chicks. Also 8.3 per cent farmers of Rupnagar and 6.3 per cent of Pathankot districts feel that there is lack of government support in promoting the welfare of broiler farmers by providing cheap raw materials and other support.

Diseases in Broiler Chickens

Mortality of chickens can lead to huge financial and psychological loss to the broiler poultry farmers. Coccidiosis is a disease which leads to mortality of chickens in large numbers as the growth of the chickens is largely affected due to intestinal problem. The symptoms of this disease is reduction in the body weight of the chickens, unwillingness of chickens to eat feed and bloody diarrhoea. Moreover, it is transmitted via droppings from infected birds to other birds through feeders, drinkers or litter. The spread of this disease at a large scale can be avoided by proper sanitation at regular intervals, avoiding and managing wet litter. The mortality of birds due to immense heat in the farm leads to heat stroke. This could be due to poor ventilation system, direct sunlight due to construction of farm in wrong direction, lack of proper cooling

system, less space per bird to grow etc. Chronic Respiratory disease (CRD) is a common respiratory infection in broilers. The birds start producing wheezing sound while breathing. There is nasal and eye discharge with distress and closed eyes, sneezing, face swelling and eye inflammation. The disease is transmitted from feed and water to other birds. It is difficult to cure so appropriate measures such as proper ventilation, provision of adequate space for bird to grow, sanitation and timely vaccination can stop the spread of the disease. Infectious Bursal Disease (IBD) is a viral disease that affects young broilers. The symptoms of this disease are lack of energy and immunity, birds grouping together, whitish and pasty diarrhoea. This disease is also called 'Gumboro'. It is witnessed in young chicks especially of more than 3 weeks of age. If uncontrolled, it may lead to a severe mortality as it is highly communicable and can cause high economic loss to the broiler poultry farmer.

This disease can be prevented by vaccinating birds at young age, proper cleaning and sanitation and giving safe feed to birds. Fowl Cholera is a bacterial diseases that affects older chickens than younger ones. The birds have watery discharge from nose, mouth and eyes, ruffled feathers, diarrhoea and loss of appetite. It leads to high mortality, roper sanitation and vaccination can control it. Infectious Bronchitis (IB) is a common disease that occurs in poultry birds and affects the reproductive, urinary and respiratory causes multiple disorders. Chickens experience watery discharge from nose and eyes. They consume less feed and water. It can spread in the entire flock from air, feed and infected birds. It can only be prevented by affective vaccination. E-colibacillosis is a bacterial disease in which infection of the yolk sac occurs and diarrhoea is witnessed. The cause of such disease can be due to poor management such as improper brooding, higher moisture content in litter, unclean water and improper sanitation. The birds become lazy, eat less feed, stunted growth, change in voice and problems in breathing. Broiler poultry farmers are advised to use clean drinkers accompanied by proper sanitation and ventilation. Marek is highly infectious and communicable viral disease that causes tumours in the various organs of the broilers along with paralysis of legs and neck. It leads to poor growth where feed intake by birds reduces. Vaccination at one day old chick on the hatchery should be given.

Table 3 reveals the mortality due to various types of diseases and other related causes along with the number of farms in which it occurred. There are several diseases which can occur in one particular farm due to which the total of all diseases is exceeding the total sample broiler poultry farms across the state of Punjab. The study shows that a majority, that is, 204 farmers (60.4 per cent) out of the total 338 sampled broiler poultry farmers have not experienced the occurrence of diseases. Chronic Respiratory Disease (CRD) is the most

common disease as it occurred in 83 (24.6 per cent) of the broiler poultry farms,
followed by

Table 3: Diseases in Broiler Chickens

Districts	Diseases in Broiler Chickens																Other Causes				Sampled
	Not Occurred		Chronic Respiratory Disease		Viral Fever		Infectious Bursal Disease		Coccidiosis		Fowl Cholera		Infectious Bronchitis		E-Colibacillosis		Heat Stroke		Genetic		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Hoshiarpur	58	67.4	16	18.6	3	3.5	7	8.1	4	4.7	2	2.3	3	3.5	1	1.2	0	0.0	3	3.5	86
Gurdaspur	56	83.6	6	9.0	1	1.5	0	0.0	3	4.5	1	1.5	0	0.0	0	0.0	3	4.5	1	1.5	67
Pathankot	38	79.2	8	16.7	1	2.1	1	2.1	2	4.2	1	2.1	0	0.0	0	0.0	0	0.0	0	0.0	48
Sangrur	9	23.7	26	68.4	3	7.9	3	7.9	2	5.3	0	0.0	0	0.0	0	0.0	1	2.6	0	0.0	38
Patiala	13	38.2	12	35.3	4	11.8	2	5.9	1	2.9	3	8.8	0	0.0	1	2.9	3	8.8	2	5.9	34
Ludhiana	15	53.6	6	21.4	4	14.3	2	7.1	1	3.6	0	0.0	0	0.0	0	0.0	4	14.3	2	7.1	28
Rupnagar	6	25.0	6	25.0	1	4.2	1	4.2	0	0.0	1	4.2	1	4.2	0	0.0	7	29.2	3	12.5	24
Jalandhar	9	69.2	3	23.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	7.7	0	0.0	13
Punjab	204	60.4	83	24.6	17	5.0	16	4.7	13	3.8	8	2.4	4	1.2	2	0.6	19	5.6	11	3.3	338

Source: Primary Survey, 2022.

Viral Fever 17 (5 per cent), 16 (4.7 per cent) farms have been affected with Infectious Bursal Disease (IBD), 13 (3.8 per cent) with Coccidiosis, 8 (2.4 per cent) with Fowl Cholera, 4 (1.2 per cent) with Infectious Bronchitis (IB) and 2 (0.6 per cent) with E-colibacillosis. Heat stroke and genetically poor health have been also responsible for the mortality as 19 (5.6 per cent) and 11 (3.3 per cent) in broiler poultry farms. Janwari et al. (2019) have also found that Colibacillosis has been the major disease whereas mortality due to Infectious Bursal Disease (IBD) and Newcastle Disease (ND) have been associated with occasional outbreaks. Another studies by Islam et al. (2019); Yadav et al. (2018) have revealed that most occurred diseases are Infectious Bursal Disease (IBD), followed by Infectious Bronchitis (IB), Fowl Cholera, Colibacillosis, Chronic Respiratory Disease (CRD), Coccidiosis and Deficiency Disorders/Stress Condition.

Across the districts of Punjab, it has been noticed that the districts like Gurdaspur, Pathankot and Jalandhar have maximum (83.6 per cent, 79.2 per cent and 69.2 per cent respectively) proportion of broiler poultry farmers have not experienced diseases. The problem of Chronic Respiratory Disease is most commonly seen in Sangrur (68.4 per cent) and Patiala (35.3 per cent) districts. The problem of Viral Fever is more pronounced in Ludhiana as 14.3 per cent farms are affected, followed by Patiala as the fraction is 11.8 per cent. Infectious Bursal Disease is witnessed the most (8.1 per cent) in the farms of Hoshiarpur and Coccidiosis is more (5.3 per cent) seen in Sangrur district. None of the broiler poultry farms in Sangrur, Ludhiana and Jalandhar districts have reported the problem of Fowl Cholera. Patiala district has 8.8 per cent broiler poultry farms which have been affected by Fowl Cholera. Infectious Bronchitis is witnessed only in Hoshiarpur (3.5 per cent) and Rupnagar (4.2 per cent) districts whereas E-Colibacillosis is seen in Patiala (2.9 per cent) and Hoshiarpur (1.2 per cent) districts. The birds dying due to Heat Stroke are relatively higher (29.2 per cent) in the poultry farms of Rupnagar district and lower (2.6 per cent) in Sangrur district. In some districts, the broiler poultry farmers received day old chicks that are genetically weak which die after some days of rearing due to poor health. The number of such cases is small across the districts expect Rupnagar as the proportion is 12.5 per cent.

Cultural & Religious Barriers in Poultry Farming

Cultural barriers and stereotypes among people in the consumption of poultry products is largely witnessed as farmers believe that these barriers affect the demand of their products negatively. Meat ban during festivals such as Navratri, leads to fall in demand sharply. Mostly in Hindu tradition, especially of the religious bent, does see a predominant vegetarianism causing fall in demand for poultry products. Table 4 shows the cultural & religious

barriers faced by the sampled broiler poultry farmers across the state of Punjab. The study shows that a majority, i.e. 254 (75 per cent) out of the total 338 sampled broiler poultry farmers, believe that there is existence of cultural & religious barriers in the broiler poultry farming. In the study of Abadula et al. (2022), also it has been pointed that there are cultural & religious constraints hampering the future growth of the poultry industry. According to Food and Agriculture Organisation chicken dominates meat consumption but faces religious and cultural barriers.

Table 4: Cultural and Religious Barriers to Poultry Farming

Districts	Cultural & Religious Barriers				Sampled
	Yes		No		
	No.	%	No.	%	
Hoshiarpur	77	89.5	9	10.5	86
Gurdaspur	66	98.5	1	1.5	67
Pathankot	47	97.9	1	2.1	48
Sangrur	20	52.6	18	47.4	38
Patiala	24	70.6	10	29.4	34
Ludhiana	10	35.7	18	64.3	28
Rupnagar	2	8.3	22	91.7	24
Jalandhar	8	61.5	5	38.5	13
Punjab	254	75.0	84	25.0	338

Source: Primary Survey, 2022.

Across the districts of Punjab, it is noticed that out of the respective totals, Gurdaspur district has the highest proportion (98.5 per cent) of the broiler poultry farmers who finds the existence of the cultural & religious barriers in the broiler poultry farming, followed by Pathankot (97.9 per cent) and Hoshiarpur districts at 89.5 per cent. The lowest proportion who finds the existence of the cultural & religious barriers in the broiler poultry farming, are the farmers of Rupnagar district (8.3 per cent), after that by Ludhiana and Sangrur districts as their percentage stands at 35.7 and 52.6 per cent respectively.

Health Problems

Broiler poultry farming involves rearing of live chickens and these birds are vulnerable to highly contagious diseases. Table 5 shows the types of health problems that broiler poultry birds have faced during their rearing period across the sampled broiler poultry farms in the state of Punjab. The study shows that a majority, that is, 248 (73.4 per cent) farmers have revealed that broiler poultry birds face the problem of diseases, followed by underweight

chickens as 65 (19.2 per cent) farmers reporting this and 45 (13.3 per cent) farmers reporting the problem of overweight chickens. Only 31 (9.2 per cent) farmers feel that lack of vaccination cause health issues in birds. The results of the present study are consistent with the findings of Rajendran & Mohanty (2003); Conroy et al. (2005); Oladeji (2011); Mohankumar (2015); Tsado et al. (2018); Ganesh (2019); Kumar et al. (2019); Nayak et al. (2020) as they have also revealed that disease outbreak is the major constraint faced by the broiler chickens. Moreover, in the studies undertaken by Rajendran & Mohanty (2003); Kumar et al. (2019); Nayak et al. (2020) have found that broiler poultry farmers have experienced the problem of improper vaccination.

Table 5: Health Problems

Districts	Health Problems								Sample d
	Diseases		Birds Underweigh t		Birds Overweigh t		Lack of Vaccinatio n		
	No. .	%	No.	%	No.	%	No.	%	
Hoshiarpur	66	76.7	10	11.6	8	9.3	11	12.8	86
Gurdaspur	52	77.6	5	7.5	0	0.0	3	4.5	67
Pathankot	31	64.6	12	25.0	11	22.9	3	6.3	48
Sangrur	28	73.7	11	28.9	11	28.9	6	15.8	38
Patiala	24	70.6	13	38.2	9	26.5	3	8.8	34
Ludhiana	21	75.0	4	14.3	1	3.6	1	3.6	28
Rupnagar	18	75.0	7	29.2	5	20.8	4	16.7	24
Jalandhar	8	61.5	3	23.1	0	0.0	0	0.0	13
Punjab	248	73.4	65	19.2	45	13.3	31	9.2	338

Source: Primary Survey, 2022.

Across the districts, the major health problem that bird undergoes is due to diseases as higher proportion of farmers in Gurdaspur (77.6 per cent), after that Hoshiarpur (76.7 per cent) district have reported it whereas the proportion is relatively lower in Jalandhar (61.5 per cent) and Pathankot (64.6 per cent) districts. As far as the problem of underweighting of birds is concerned, the proportion is reported higher among the farmer in Patiala (38.2 per cent) and Rupnagar (29.2 per cent), whereas the proportion is relatively lower in Gurdaspur as 7.5 per cent there and 11.6 per cent in Hoshiarpur districts have reported it. The problem of overweight chickens have been noticed in 28.9 per

cent of broiler poultry farmers in Sangrur 26.5 per cent in Patiala districts. None of the farmers in Gurdaspur and Jalandhar districts have witnessed this problem. The farmers reporting the lack of timely vaccination leading to increase in health problem in birds are higher by proportion in Rupnagar (16.7 per cent), followed by 15.8 per cent in Sangrur and 12.8 per cent in Hoshiarpur districts. None of the farmers in Jalandhar district have reported this problem.

Conclusions

The surplus generating capacity in the agriculture sector has exhausted with time, thereby, generating chance for allied sector to grow considerably. This has opened the potential of poultry farming business in India. The results of the present paper unfolds the constraints faced by those involved into broiler poultry farming venture. It is witnessed that a greater proportion of broiler poultry farmers in the state of Punjab are facing the major constraint of expensive feed, followed by expensive day old chicks, exploitation by the companies, exorbitant prices of vaccines, shortage of skilled labour, lack of improved breeds, low quality feed, costly labour, uneasy availability of finance (loan), untimely supply of day old chicks and lack of government support in the broiler poultry farming operations. These are the major production constraints occurring in broiler poultry farming.

A major fraction of the broiler poultry farmers finds the existence of cultural & religious barriers in poultry farming affecting the supply conditions. In broiler poultry farming enterprise, farmers have to deal with live birds and there are huge chances of occurrence of health issues. A large number of broiler poultry farmers have reported that broiler birds faced the problem of diseases, followed by underweight as well as overweight chickens and untimely veterinary service which cause major health issues in birds. A majority of broiler poultry farmers in the state of Punjab, have not experienced occurrence of any severe disease. Chronic Respiratory Disease (CRD) is the most common disease, followed by Viral Fever, Infectious Bursal Disease (IBD), Coccidiosis, Fowl Cholera, Infectious Bronchitis (IB) and E-colibacillosis. Heat Stroke and Genetically Poor bird have been also responsible for the mortality.

Recommendations

The study recommends that there is an urgent need to draw up a better policy framework to protect and promote the interests of broiler poultry farms in the state of Punjab. Setting up of veterinary diagnostic laboratories will help in early diagnosis of disease. These can be opened especially in priority/key areas where a high concentration of broiler poultry farms exist at the village/district level.

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