

A Study on Financial Problems Faced by Poultry Farmers with Reference to Western Tamil Nadu

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Abstract

The Indian poultry industry is one of the fastest growing segments of the agricultural sector and is also providing employment opportunities to lakhs of people. Driving this expansion are a combination of factors like growth in per capita income, a growing urban population, and falling real poultry prices. Poultry exports are mostly to Maldives and Oman. Indian poultry meat products have good markets in Japan, Malaysia, Indonesia, and Singapore. In India poultry industry is suffering from poor infrastructure for export which is hindering the export of poultry products, competition from international players in opening up duty-free imports, lifting of trade barriers, lack of FDI in India in this sector, availability of very few state of the art processing plants and post harvest technologies, increasing propaganda and demonstrations by organizations for promoting vegetarianism and animal rights, occurrence of Salmonella and cholesterol in poultry meat. Many countries are dumping their poultry products i.e. exporting eggs at prices lower than production cost. Indian poultry industries are mainly suffering from financial problems and this article is focused on how to handle the financial problems.

Keywords: Economy, financial problems, livestock, poultry farmers

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India ranks first in having the largest livestock population in the world. Livestock plays an important role in the national economy as well as in socio-economic development (Bagharwal, 1989, p. 32) by augmenting family income and generating gainful employment in rural areas, particularly for the landless, small and marginal farmers, and women. With its 1.2 billion population and 8% GDP growth rate, India is rapidly emerging as one of the biggest markets in the world. Livestock sector contributes approximately 4% to GDP, and 27% to agricultural GDP. Poultry and dairy sectors are the major sectors contributing to economic development. The poultry sector has undergone a paradigm shift in structure and operation during the last two decades. It has transformed itself from a mere backyard activity into a major commercial activity with participation of big players as also successful implementation of contract poultry farming on a large scale (Mohanty & Rajendran, 2003; Vershinin, 1986).

In India, poultry farming as an industry has shown impressive record of growth in recent years. Poultry farming offers entrepreneurial opportunities for agriculturists. Farmers, both small and marginal find this to be an effective supplementary enterprise. For medium and large farmers too, this industry has opened up avenues to increase their income. Poultry farming is seen as the main source of income by many agriculturists due to the uncertainties in the sources of agricultural income and large quantities of agro-industrial byproducts, which are used as feed ingredients for transformation into eggs and meat. Poultry industry is providing large employment opportunities to the unskilled rural population. Realizing this, the development plans of the government, both central and state encourages poultry farming, dairying, goat and sheep rearing, and other similar pursuits with the provision of simple training.

In very recent times, over a span of no more than 30 years, there have been greater changes in methods of keeping poultry than probably in any other sector of the world's livestock agricultural production. It has now become the most

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intensive of all branches of livestock farming. In many countries, poultry are now ahead of all other livestock in economic importance. Productivity has increased remarkably.

Apart from direct employment on the farm, people away from the production center are also employed for transportation and distribution among consumers. It has an enormous potential to improve the socio-economic status of rural people, particularly landless, small, and marginal farmers as it requires minimum capital investment which gives quick and good return. It is a promising agri-business for eradicating hunger, alleviating poverty, helping to check migration to cities by providing opportunity for employment especially, to rural young men and women. The employment potential of poultry in India can be understood from the fact that India's share in the total world poultry trade is negligible.

Integrated Contract Farming

A broiler contract growing arrangement is generally a contract between an *integrator* (company) which supplies the intermediate inputs and procures the output, and a grower (farmer), who provides the primary inputs in the production process (Abhiram, 2001; Devaraj & Anurag, 2010). The integrator provides day-old-chicks, feeds, veterinary supplies and services, and implements the final marketing of the output.

The contract grower typically provides the space and facilities (land and housing), manure, and dead bird disposal, equipment, utilities, labor (family and/or hired), day-to-day farm management, and deals with the neighbors and local authorities (Abhiram, 2001). There are two main types of contracts: fee (or wage) contracts (by bird or by weight) and forward-price contracts (guaranteed or/and with profit-sharing). They differ mainly in the mode of grower compensation, in the accounting and shouldering of growing stock and feeds, in the need to monitor production activities, and in the need for enforcement of actual deliveries. They also differ accordingly in the incentives, penalties, risks, and the provisions for defaults.

Statement of the Problem

Poultry farming (broiler) offers very good entrepreneurial opportunities for the farmers in Western India. The climatic condition of this region is suitable for poultry farms. Hence, poultry farming is considered a profitable and supplementary enterprise for the agricultural farmers of this area. In spite of this, the present farmers (Chengappa, 2010) are facing many problems in broiler farming such as mobilizing of working capital, payment of agriculture loans, diseases and intensification, poor quality of chicks, lack of medicine, increasing farmers inputs like water, electricity, chalk coal, improper guidance of staff who monitor the batch and deputed by the integrator, penalties by the integrator on the performance of the batch etc. This situation motivated the researcher to study the financial problems faced by the broiler farmers in the region (Gnanakumar, 2007). This study will also help the integrators to understand the financial impact faced by the farmers.

Objectives and Scope of the Study

The objective of this study is to understand the financial problems faced by farmers, and the factors causing these problems in Coimbatore region. The study is based on the data provided by the respondents in the region. It delves into opportunities for poultry integrators in the region and it will also help the chick growers (farmers) to understand whether their units are running in profit or loss and advantages of integrated poultry farming. It also helps farmers in their minimum investment decision in this sector. The study also helps to know the profit potentials of integrated poultry production and provides some suggestions to maximize their profits through integration, and to improve the performance of the poultry farming business.

Research Hypotheses

The following hypothesis was framed:

The problems and challenges faced by the farmers in the poultry industry are significantly related to their contract

farming operations and their investment and profitability of the business. This hypothesis is cascaded into the following research hypothesis:

The causes related to finance expressed by farmers do not have any significant association with the financial problems faced by farmers in terms of less growing charges per kilogram of chicken production, less returns on investment, and delay in growing charges payment.

Methodology

(1) Research Method : Survey method was used for this study as it is the most appropriate method for descriptive research design. Survey can be used to learn about farmers and opinions of integrators, preferences, perception, satisfaction, etc. A survey instrument (questionnaire) was developed and the respondents were asked to fill it up. The respondents were personally interviewed by the researcher in their farmer/organization, as it is the preferred method for doing surveys in India, and the data were collected. We had chosen this survey method because the questionnaire was extensive and getting the co-operation of respondents when they were working in their farm or organization, in-between their work was difficult. Through survey method, we can measure sample statistics of various variables and the sample statistics can be used for estimating population parameters.

(2) Area and Period of the Study : The area of the study is confined to Western Tamil Nadu that includes districts namely, Coimbatore, Erode, and Tirupur, and the present study deals with broiler farms only. The study was conducted from June 2015 to March 2016.

(3) Type of Research : The classification of type of research in real life situations may not be confined to a particular type strictly. The research design provides the framework to be used as a guide in collecting and analyzing data. This study broadly follows descriptive research design. As the name implies, the major objective of descriptive research is to describe something, usually farmers and integrator characteristics or functions. Cross-sectional descriptive research design was used. Cross-sectional design is a one- shot research study at a given point of time and consists of a sample (cross-section) of the population of interest.

(4) Sources of Data : Both primary and secondary data were collected so as to fulfil the various objectives of the research study. This research study is explorative in nature. For the purpose of collection of data, a detailed interview schedule was prepared to collect data from the farmers. Adequate care was exercised to collect unbiased data from the respondents. All the respondents were personally interviewed by the researcher and responses were recorded in the schedule.

(5) Sampling Method : The interview schedule was structured in a simple and understandable way to cover the objective of the study. The method of sampling adopted for the study was proportionate random sampling method. This sampling method was adopted to find out the samples and the proportionate value of each taluk was calculated and based on the values, samples were finalized by snowballing technique to identify the respondents.

(6) Sample Design : For the purpose of the study, the total numbers of farmers selected for the study was 375 from the farmers' population of 6011 which were taken into account. To find out the farmers' sample size from the farmers' population, the researcher used Taro Yamane's formula.

Taro Yamane's formula: $n = N/[1+N(e)^2]$

where, n = sample size,
 N = population size (The universe),
 e = sampling error (usually 0.10, 0.05, and 0.01 acceptable error),
 $^{\wedge}$ = raised to the power of.

(7) Tools Used for Analysis : Descriptive statistical measures namely, frequency distribution, arithmetic mean, standard deviation, and inferential statistics namely, Chi square test, *F* - test, and *t*-test were used in this study.

Working Capital and Other Financial Related Responses of Farmers

Table 1. Farmers' Response to Growing Charge and Production Cost in Poultry Contract Farming

Variable	Responses	Number of Respondents	%
Growing charges per kilogram chicken	Less than ₹ 3.5	9	2.4
	₹ 3.6 to ₹ 4	118	31.5
	₹ 4.1 to ₹ 4.5	80	21.3
	₹ 4.6 to ₹ 5.0	64	17.1
	₹ 5.1 to ₹ 5.5	94	25.1
	₹ 5.6 and above	10	2.7
Production cost per kilogram of chicken	₹ 40 to ₹ 50	53	14.1
	₹ 51 to ₹ 60	117	31.2
	₹ 61 to ₹ 70	25	54.6

The farmers reported that, finance related problems are less growing charge per kilogram of chicken they produced and the return on investment is less. Companies were delaying growing charge payment of the farmers (Table 1). The causes for these problems were reported by the farmers as: high production cost, delay in payment of growing charges, more number of days to take the growing charges payments, and sourcing of major source of working capital (Kumar, & Kumar, 2008). The interview schedule constructed to contain information about these factors is given below:

Hypothesis : The causes related to finance expressed by farmers do not have any significant association with the financial problems faced by them in terms of less growing charges per kilogram of chicken production, less returns on investment, and delay in growing charges payment.

Finance Related Problems and Their Causes

Table 2. Finance Related Problems and Their Causes

Serial number	Problems	Causes
1	Less growing charge per kilogram of chicken	Production cost
		Growing charge per kilogram of chicken.
		On time payment of growing charges
		Growing charge payment days
2	Less return on investment	Major source of working capital
		Production cost
		Growing charge per kilogram
		On time payment of growing charges
3	Delay in growing charge payment	Growing charge payment days
		Major source of working capital
		Production cost
		Growing charge per kilogram
		On time payment of growing charges
		Growing charge payment days
		Major source of working capital

On the basis of Table 2, to find whether the causes expressed by farmers are significantly associated with the problems of less growing charge per kilogram of chicken, less return on investment, and delay in growing charge payment, the following hypothesis was framed: delay in payment of growing charges, more number of days to take charges payments, and sourcing of major working capital do not have any significant association with financial problems faced by the farmers.

Hypothesis: Less growing charge per kilogram of chicken does not have any significant association with production cost, growing charge per kilogram, on time payment of growing charges, growing charge payment days, and major source of working capital.

Regarding production cost per kilogram of chicken as mentioned in Table 3, 205 respondents said that production cost is ₹ 60 to ₹ 70 and among these, 85.4% reported they are getting the growing charges per kilogram of chicken as ₹ 3.50 to ₹ 4.50 per kilogram, and 10.2% have reported the growing charges per kilogram of chicken as ₹ 4.50 to ₹ 5.50 per kilogram. Among the 117 respondents, 80.3% have reported the growing charges per kilogram of chicken as ₹ 4.50 to ₹ 5.50 per kilogram. Among the 53 respondents, 81.1% have reported the growing charges per kilogram of chicken production as ₹ 4.50 to ₹ 5.50 per kilogram. The calculated chi-square value 270.87 is higher than the table value of 16.812 at 1% level. Hence, it can be inferred that growing charge per kilogram is significantly related to production cost per kilogram.

Regarding on-time payment of growing charges, 127 respondents disagreed that the payment of growing charges was on time, and among these, 57.5% reported they are getting growing charges per kilogram of chicken as ₹ 3.50 to ₹ 4.50 per kilogram. 42.5% reported the growing charges per kilogram of chicken as ₹ 4.50 to ₹ 5.50 per kilogram. Among the 115 respondents, neither agreed nor disagreed with the on-time payment of growing charges and among these, 55.7% reported that growing charges per kilogram of chicken as ₹ 3.50 to ₹ 4.50 per kilogram. 70 respondents agreed that there was on-time payment of growing charges and among these, 51.4% reported growing charges per kilogram of chicken as ₹ 4.50 to ₹ 5.50 per kilogram. The calculated chi-square value is 73.981, which is higher than the table value of 26.217 at 1% level. Hence, it can be inferred that growing charge per kilogram is significantly related to on-time payment of growing charges.

Table 3. Relationship Between Growing Charge per Kilogram of Chicken Production and its Causes

Finance		Growing charge per kilogram of chicken production (₹)								Total		Chi-Square			
Problems		Less than ₹ 3.50		₹ 3.50-4.50		₹ 4.50-5.50		₹ 5.50-6.50							
		Number of respondents	%	Number of respondents	%	Number of respondents	%	Number of respondents	%	Number of respondents	%	Value	Df	Sig.	Table value
Production cost	₹ 40-50	0	0	0	0	43	81.1	10	18.9	53	100.0	270.87	6	**	16.812
	₹ 50-60	0	0	23	19.7	94	80.3	0	0	117	100.0				
	₹ 60-70	9	4.4	175	85.4	21	10.2	0	0	205	100.0				
On time payments	Strongly Agree	0	0	19	51.4	18	48.6	0	0	37	100.0	73.981	12	**	26.217
	Agree	0	0	24	34.3	36	51.4	10	14.3	70	100.0				
of growing charges	Neither Agree nor Disagree	9	7.8	64	55.7	42	36.5			115	100.0				
	Disagree			73	57.5	54	42.5			127	100.0				
	Strongly Disagree			18	69.2	8	30.8			26	100.0				
Number of days to take the growing charges payments	4-6 Days			9	45.0	11	55.0			20	100.0	20.923	9	*	21.666
	7-10 Days			24	58.5	17	41.5			41	100.0				
	11-14 Days			26	86.7	4	13.3			30	100.0				
	15 and Above Days	9	3.2	139	48.9	126	44.4	10	3.5	284	100.0				
Major source of working	Bank loan	9	7.9	87	76.3	18	15.8			114	100.0	81.817	6	**	16.812
	Own money			102	40.5	140	55.6	10	4.0	252	100.0				

capital	Both			9	100.0					9	100.0
Total		9	2.4	198	52.8	158	42.1	10	2.7	375	100.0

Note: NS - Not Significant, * - Significant at 5% level, ** - Significant at 1% level

Regarding total time taken for paying the growing charges to farmers, 284 respondents said that the total time taken for paying the growing charges to farmers is 15 days and above; among these, 48.9% reported that they are getting growing charges per kilogram of chicken as ₹ 3.50 to ₹ 4.50 per kilogram. 44.4% reported that growing charges per kilogram of chicken are ₹ 4.50 to ₹ 5.50 per kilogram. The chi-square value is 20.923, which is less than the table value of 21.666 at 1% level. Hence, it can be inferred that growing charges per kilogram are not significantly related to total time taken for paying the growing charges to farmers.

Regarding source of working capital, 252 respondents said that the source of working capital is own money and among these, 55.6% reported they are getting growing charges per kilogram of chicken production as ₹ 4.50 to ₹ 5.50 per kilogram, and 40.5% reported the growing charges per kilogram of chicken as ₹ 3.50 to ₹ 4.50 per kilogram. 114 respondents said that the source of working capital is bank loan and among these, 76.3% reported the growing charges per kilogram of chicken as ₹ 3.50 to ₹ 4.50 per kilogram. 9 respondents said that the source of working capital is own and loan money, and the growing charges per kilogram of chicken production as ₹ 3.50 to ₹ 4.50 per kilogram. The calculated chi-square value is 81.817, which is higher than the table value of 16.812 at 1% level. Hence, it can be inferred that growing charge per kilogram is significantly related to the source of working capital. Chi-square values are found to be greater than the table value at 1% level of significance for these variables. Hence, the hypothesis related to growing charge per kilogram with respect to production cost per kilogram of chicken, on-time payment of growing charges, and source of working capital.

Hypothesis: Less returns on investment in the business do not have significant association with production cost, growing charge per kilogram, on time payment of growing charges, growing charge payment days, and major source of working capital.

Regarding production cost per kilogram of chicken as mentioned in Table 4, 205 respondents said that production cost is ₹ 60 to ₹ 70 and among these, 52.2% reported return on investment in the business as less-than 5%. 24.4% reported the return on investment in the business as 11 to 15%. Among the 117 respondents, 58.1% reported the return on investment in the business as 5-10%. 53 respondents, that is, 67.9% reported the return on investment in the business as less than 5%. The calculated chi-square value 84.792 is higher than the table value of 13.277 at 1% level. Hence, it can be inferred that return on investment in the business is significantly related to production cost per kilogram.

Regarding growing charges per kilogram of chicken, 198 respondents said that the growing charges per kilogram of chicken is ₹ 3.50 to ₹ 4.50 and among these, 42.4% reported that they are getting less than 5% return on investment in the business. 40.4% reported return on investment in the business as 5-10%. 158 respondents said that growing charges per kilogram of chicken is ₹ 4.50 to ₹ 5.50 and among these, 56.3% reported the return on investment in the business as less than 5%. The calculated chi-square value 31.892 is higher than the table value of 16.812 at 1% level. Hence, it can be inferred that growing charges per kilogram are significantly related to return on investment in the business.

Regarding on-time payment of growing charges, 127 respondents disagreed about the on-time payment of growing charges and among these, 58.3% reported the return on investment in the business as less than 5%. 29.1% reported the return on investment in the business as 5% - 10%. 115 respondents neither agreed nor disagreed about on-time payment of growing charges and among these, 63.5% reported return on investment in the business as less than 5%. The calculated chi-square value 105.503 is higher than the table value of 20.090 at 1% level. Hence, it can be inferred that return on investment in the business is significantly related to on-time payment of growing charges.

Regarding total time taken for paying the growing charges to farmers, 284 respondents said that total time taken for paying growing charges to farmers is 15 days and above, and among these 53.9% reported that the return on investment in the business is less than 5%. 31% reported the return on investment in the business as 5%-10%. The calculated chi-square value 19.801 is less than the table value of 16.812 at 1% level. Hence, it can be inferred that return on investment in the business is significantly related to total time taken for paying the growing charges to farmers.

Regarding source of working capital, 252 respondents said that the source of working capital is own money and among these, 55.2% reported the return on investment in the business as less than 5%. 31.7% reported the return on

Table 4. Relationship Between Return on Investment in the Business and its Causes

Finance Problems	Return on investment in the business								Total				Chi-Square			
	Less than 5%		5-10%		11-15%								Value	Df	Sig.	Table value
	Number of respondents	%	Number of respondents	%	Number of respondents	%	Number of respondents	%	Number of respondents	%	Number of respondents	%				
Production cost	₹ 40-50	36	67.9	00	0	17	32.1	53	100				84.792	4	**	13.277
	₹ 50-60	49	41.9	68	58.1	0	0	117	100							
	₹ 60-70	107	52.2	48	23.4	50	24.4	205	100							
Growing Charge per kg	Less than ₹ 3.50	9	100.0	0	0	0	0	9	100				31.892	6	**	16.812
	₹ 3.50-4.50	84	42.4	80	40.4	34	17.2	198	100							
	₹ 4.50-5.50	89	56.3	36	22.8	33	20.9	158	100							
	₹ 5.50-6.50	10	100.0	0	0	0	0	10	100							
On time payment of growing charges	Strongly Agree	9	24.3	9	24.3	19	51.4	37	100				105.503	8	**	20.090
	Agree	36	51.4	26	37.1	8	11.4	70	100							
	Neither Agree nor Disagree	73	63.5	18	15.7	24	20.9	115	100							
	Disagree	74	58.3	37	29.1	16	12.6	127	100							
	Strongly Disagree	0	0	26	100.0	0	0	26	100							
Growing charge payment days	4-6 Days	11	55.0	5	25.0	4	20.0	20	100				19.801	6	**	16.812
	7-10 Days	13	31.7	11	26.8	17	41.5	41	100							
	11-14 Days	15	50.0	12	40.0	3	10.0	30	100							
	15 and Above Days	153	53.9	88	31.0	43	15.1	284	100							
Major source of working capital	Bank loan	44	38.6	36	31.6	34	29.8	114	100				25.290	4	**	13.277
	Own money	139	55.2	80	31.7	33	13.1	252	100							
	Both	9	100.0	0	0	0	0	9	100							
	Total	192	51.2	116	30.9	67	17.9	375	100							

Note: NS - Not Significant, * - Significant at 5% level, ** - Significant at 1% level

investment in the business as 5-10%, and 13.1% reported the return on investment in the business as 11-15%. 114 respondents said that the source of working capital is bank loan and among these, 38.6% reported the return on investment in the business as less than 5%. 9 respondents said that the source of working capital is own money and loan, and the return on investment in the business is less than 5%. The calculated chi-square value 25.290 is higher than the table value of 13.277 at 1% level. Hence, it can be inferred that return on investment in the business is significantly related to source of working capital.

The chi-square values are found to be greater than the table value at 1% level of significance for these variables. Hence, the hypothesis related to return on investment in the business with respect to the production cost per kilogram of chicken, growing charge per kilogram of on-time payment of growing charges, total time taken for paying the growing charges to farmers, and source of working capital.

Hypothesis: Delay in growing charge payments does not have significant association with production cost, growing charge per kilogram, on time payment of growing charges, growing charge payment days, and major source of working capital.

Regarding production cost per kilogram of chicken, 205 respondents said that production cost is ₹ 60 to ₹ 70 and among these, 65.9% have reported that there is no delay in growing charge payments. 34.1% reported the delay in growing charge payments. Among the 117 respondents, 69.2% reported there is no delay in growing charge payments. 53 respondents (83%) reported there is no delay in growing charge payments (Table 5). The calculated chi-square value

Table 5. Relationship Between Delay in Growing Charge Payments and its Causes

Finance Problems		Delay in growing charge payments									
		No		Yes		Total		Chi-Square			
		Number of respondents	%	Number of respondents	%	Number of respondents	%	Value	Df	Sig.	Table Value
Production cost	₹ 40-50	44	83.0	9	17.0	53	100.0	5.837	2	Ns	5.991
	₹ 50-60	81	69.2	36	30.8	117	100.0				
	₹ 60-70	135	65.9	70	34.1	205	100.0				
Growing charge per kilogram	Less than ₹ 3.50	9	100.0	0	0	9	100.0	31.753	3	**	11.345
	₹ 3.50-4.50	130	65.7	68	34.3	198	100.0				
	₹ 4.50-5.50	121	76.6	37	23.4	158	100.0				
	₹ 5.50-6.50	0	0	10	100.0	10	100.0				
On time payment of growing charges	Strongly Agree	19	51.4	18	48.6	37	100.0	75.945	4	**	13.277
	Agree	44	62.9	26	37.1	70	100.0				
	Neither Agree nor Disagree	115	100.0	0	0	115	100.0				
	Disagree	67	52.8	60	47.2	127	100.0				
	Strongly Disagree	15	57.7	11	42.3	26	100.0				
Growing charge payment days	4-6 Days	20	75.0	0	25.0	20	100.0	43.28	3	**	11.345
	7-10 Days	41	78.0	0	22.0	41	100.0				
	11-14 Days	27	53.3	3	46.7	30	100.0				
	15 and Above Days	172	69.4	112	30.6	284	100.0				
Major source of working capital	Bank loan	67	58.8	47	41.2	114	100.0	11.569	2	**	9.210
	Own money	184	73.0	68	27.0	252	100.0				
	Both	9	100.0	0	0	9	100.0				
Total		260	69.3	115	30.7	375	100.0				

2.NS - Not Significant, * - Significant at 5% level, ** - Significant at 1% level

5.837 is less than the table value of 5.991 at 1% level. Hence, it can be inferred that production cost per kilogram is significantly not related to delay in growing charge payments.

Regarding growing charges per kilogram of chicken, 198 respondents said that the growing charges per kilogram of chicken are ₹ 3.50 to ₹ 4.50 and among these, 65.7% reported that there is no delay in growing charge payments. 34.3% reported that there is a delay in growing charge payments. 158 respondents said that the growing charges per kilogram of chicken are ₹ 4.50 to ₹ 5.50 and among these, 76.6% reported that there is no delay in growing charge payments. The calculated chi-square value 31.753 is higher than the table value of 11.345 at 1% level. Hence, it can be inferred that growing charge per kilogram is significantly related to delay in growing charge payments.

Regarding on-time payment of growing charges, 127 respondents disagreed with the on-time payment of growing charges and among these, 52.8% reported that there is no delay in growing charge payments. 47.2% reported that there is a delay in growing charge payments. 115 respondents neither agreed nor disagreed that payment of growing charges is on-time and everyone reported that there is no delay in growing charge payments. The calculated chi-square value is 75.945 higher than the table value of 13.277 at 1% level. Hence, it can be inferred that there is delay in growing charge payments and it is significantly related to on-time payment of growing charges.

Regarding total time taken for paying the growing charges to farmers, 284 respondents said that total time taken for paying growing charges to farmers is 15 days and above, and among these 69.4% reported that there is no delay in growing charge payments. 30.6% reported that there is a delay in growing charge payments. The calculated chi-square value 43.28 is less than the table value of 11.345 at 1% level. Hence, it can be inferred that delay in growing charge payments is significantly related to total time taken for paying growing charges to farmers.

Regarding source of working capital, 252 respondents said that the source of working capital is own money and among these, 73% reported that there is no delay in growing charge payments. 27% reported that there is a delay in growing charge payments. 114 respondents said that the source of working capital is bank loan and among these, 58.8% reported that there is no delay in growing charges payments. There are 9 respondents said that the source of working capital is own and loan money and that there is no delay in growing charge payments. The calculated chi-square value 11.569 is higher than the table value of 9.210 at 1% level. Hence, it can be inferred that delay in growing charge payments is significantly related to source of working capital.

The chi-square values are found to be greater than the table value at 1% level of significance for these variables. Hence, the hypothesis related to delay in growing charge payments with respect to the growing charge per kilogram, on-time payment of growing charges, total time taken for paying the growing charges to farmers, and source of working capital.

Conclusion

Indian poultry Industry has attained enormous growth in recent times due to increase in family income, more poultry production, falling poultry cost, and a modern younger poultry consuming generation. Predominantly in southern and western India, involvement of poultry integrators has been vital in advanced poultry production and cost reduction (Begum, 2005). The integrators appear to have achieved this by increasing productivity, reducing marketing margins, and customer pricing. In the last twenty years, poultry industry has made a remarkable stride specifically, in the private sector because of which India is now self sufficient in contemporary poultry equipment, skillfully trained resources, readiness of medications/vaccines, and superior quality breeding stocks. Poultry farming had several ups and downs in the last couple of decades as a result of unplanned growth and lack of government regulations. Poultry contract farming can be a profitable business even with irregularities in the industry. The main objective of the study was to find out the financial problems of poultry contract farming in western Tamil Nadu that includes Coimbatore, Tirupur, and Erode. It provided data on the poultry farmers, and their performance in poultry farming business, which is an effective avenue for farmers to increase the income in rural areas.

In this contract farming model, the major problems are low feed conversion ratio, theft of input supplies and broiler birds, mismatches in growing charges, quality of input and output, corruption and labour problems, price rise of farm inputs, demand pricing and surplus production problems, and diseases to poultry. To ensure the health and productivity of poultry products, poultry farmers should continue to employ best management practices recommended by integrators. As a result of these factors, many of the present day poultry practices are based on tested scientific facts. From the detailed study done by the researcher with concrete objectives, the study reveals much information regarding poultry contract farming and its present financial problems of poultry contract farming.

Limitations of the Study

The sample size was restricted to Coimbatore, Erode, and Tirupur districts of Tamil Nadu. The analysis is based on data collection with the help of the interview schedule and this has its own limitations. Majority of the poultry farmers are from this study area and the data collection was done with proper care and to reduce sampling bias. The sample respondents were randomly selected and proportionately distributed across all the study areas. The information provided by the respondents was purely based on their perception only. The quality and reliability of the data collected were the actual expressions of respondents.

Implications

This study will help farmers to understand the problems and challenges of poultry business and for integrators, the issues and perception of farmers in poultry business processes and poultry management practices. Integrators have to create a common understanding with farmers for better productivity and transparent profit sharing system to create a win-win situation. Investment decisions of farmers and integrators are vital to the poultry industry. Finally, it is

concluded that the researcher has gained more knowledge and experience in the field of research and it will be even helpful for future research activities as there is a possibility for future research in the same field.

Scope for Further Study

The researcher has identified the following research areas related to the present study which can be attempted by the prospective researchers in future. This study which was conducted in the western region of Tamil Nadu can be extended to the whole of India for better generalization of the findings, but all India studies would involve more time and money which are beyond the means of academic researchers. Similar studies may be extended to other livestock such as cattle, pig, goat, and fisheries.

References

- Abhiram, S. (2001). Supply chain management and role of contract farming. *Indian Food Packer*, 51(2), 81-85.
- Bagharwal, R. K. (1989). Poultry in social economic development of small farmers. *Poultry Guide*, 26(6), p. 32.
- Begum, I. A. (2005). An assessment of vertically integrated contract poultry farming - A case study in Bangladesh. *International Journal of Poultry Sciences*, 4(3), 167-176.
- Chengappa, P. G. (2010). *Emerging issues in contract farming in India*. Paper presented at Contract Farming in India – Present scenario and future prospect.
- Devaraj, M., & Anurag (2010). *Contract Farming in India – Present scenario and Future Prospects*. New Delhi : Excel India Publishers.
- Gnanakumar, P. B. (2007). Financial feasibility of investments in contract poultry farming. *Indian Journal of Marketing*, 37(12), 14-22.
- Kumar, J., & Kumar, P. K. (2008). Contract farming: Problems, prospects and its effect on income and employment. *Agricultural Economics Research Review*, 21(2), 243-250.
- Mohanty, S., & Rajendran, K. (2003). 2010 vision for Indian poultry. *International Journal of Poultry Science*, 2(2), 139-143.
- Vershinin. (1986). Organizational and economic problems of contract farming on the basis of family groups organization. *Ekonomichesk*, 1(3), 23-29.

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