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Socio-Economic Status of Contract and Non-Contract Broiler Farmers in Eastern Plain Zone Of Uttar Pradesh

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ABSTRACT
The present study was conducted with the objective to assess and compare the socio-economic status of contract and non-contract broiler farmers in four randomly selected blocks of Azamgarh and Varanasi districts of Uttar Pradesh. The results revealed that Maximum percentage of broiler farmers (53.33%) were young, belonged to Muslim community (54.17%), OBC caste (56.67%) and having Intermediate level of education. Majority of the respondents (65%) possessed nuclear family, medium family size (50.83%), small land holding (41.67%), agriculture as their primary and broiler farming as their secondary occupation. Around 63.33 percent of broiler farmers had low experience in broiler farming. Average experience of contract broiler farmers (3.59 years) was lower than that of non-contract broiler farmers (4.82 years).
KEY WORDS: *Occupation, Graduation, Experience, Land holding, Caste.*

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INTRODUCTION

The poultry farming in India occupies an important position due to its enormous potential to bring about rapid economic growth, particularly benefiting the weaker section due to its low investment requirement and short gestation period. The poultry, which was considered as a backyard proposition in the early 60's has now been transformed into a strong agro-based commercial activity having tremendous employability and income generation potential. Poultry industry contributes about Rs. 600 billion, accounting for about 0.77 per cent of the national GDP and about 10 per cent of the livestock GDP and provides employment to over five million people in the country. The Indian poultry sector has witnessed one of the fastest growing sector with 7.3 per cent growth in poultry population, 8 per cent in egg production and 10 per cent in meat production, over the last decade (2003-2013) amongst all animal based sectors. The high growth has placed India at 3rd position in egg production with a production of 75 billion eggs and 5th position in chicken meat with a production of 3.7 million metric tons of chicken meat [5].

Uttar Pradesh, in spite of its large human population, contributed just around 2.56 per cent of the country's poultry population [6]. As egg production of the state was 181.223 crores per year, while the consumption is 473 cores per year. This huge gap in demand and supply of about 292 crores per year was met by the private sector through procuring nearly one crore eggs daily from other states. Similarly, the requirement of chicken meat was met through purchasing an approximately 10 crore day old broiler chicks from other states annually, therefore it is much needed to prioritise poultry development in the animal husbandry sector. As per the recommendations of the Indian Nutritional Academy, Hyderabad, there should have been consumption of 182 eggs per head per annum as standard. At National level 55 eggs per person are consumed annually, while the state average is only 22 eggs per person annually.

Similarly, the standard suggested for meat consumption is 11 kg, while the national availability is 2.8 kg and for U.P, it was 0.987 kg per head per annum [1].

The poultry contract is an instance of a "production management" contract, where the processor supplies inputs and extension services, advances credit (in kind), provides price insurance and monitors grower effort through frequent inspections. The detailed monitoring is because of the considerable credit advanced by the processor that provides more than 90 per cent of the cost of production in terms of the value of inputs. Because the frequent monitoring controls for moral hazard, it is also conducive to insurance. The frequency of contact also would mean that the processor incurs considerable transaction costs. A contract farming arrangement in poultry production, referred to as "chick growing agreement" is generally a wage contract between an Integrator, who supplies the intermediate inputs and procures the output, and a poultry farmer, who provides the primary inputs in the production process. The Integrator provides the growing stock (DOCs; fatteners), feed, veterinary supplies and services, and implements the final marketing of the output. The contract farmer typically provides the space and facilities (land and housing), equipment, utilities, labours (family and/or hired) and day-to-day farm management. Thus, the major component of working capital is borne by the Integrator and He is the absolute owner of movable stocks in the farm [2].

The farmer receives a guaranteed wage or growing charges for each live bird based on its live weight in a condition that is predetermined and agreed upon through contractual obligation. These are usually specified by the Integrator for the purposes of live sale or slaughter. Generally the payments are linked to the performance criteria in terms of efficiency in managing the birds; for example the weight, quantum of feed used to produce that weight (Feed Conversion Ratio- FCR), percentage of birds died and others. Additional incentives are given to the farmer for surpassing the performance standards. For farmers who fall below the set standards, corresponding penalty amount per bird is subtracted from the wage bill. Hence, the production contracts can be seen as a self regulating system of reward and punishment to ensure cost effective production of poultry for the Integrator in accordance with the quality and quantity, needed by the markets. In a poultry contract, hatcheries provide day-old chicks, feed and medicines to contract growers. The contract growers supply land, labour and other variable inputs (like electricity). At the end of the production cycle, the farmer receives a net price (by weight) that is pegged to an industry price set by a group of hatcheries (not the retail price). The industry price fluctuates within a narrow range and is a lot more stable than the retail price. Thus, the farmer receives considerable price insurance. For sharp upward deviations of the retail price from the industry price, farmers receive an incentive. This practice presumably lessens the incentives to default on the part of growers and reflects the competition from the non-contract sector.

The farmer is insured for mortality rates up to 5 per cent. Beyond that the farmer bears the risk of loss. This controls moral hazard and provides incentives for farmers to supply their best effort. A company representative who sorts out problems, especially regarding disease visits the farmer daily. According to company accounts, the processor spends time and resources in screening producers for reputation and prior experience.

MATERIALS AND METHODS

For the present study, two districts Azamgarh and Varanasi were selected, purposely, out of 12 districts of the eastern plain zone of Uttar Pradesh, on the basis of poultry population. Two blocks from each selected district, Mahrajganj and Bilariyaganj from Azamgarh and Kashi Vidyapeeth and Pindra from Varanasi district were selected, randomly. Thus, four blocks were selected from both the districts. Contract and non-contract broiler farmers in each block were listed separately. Fifteen contract and fifteen non-contract broiler farmers, having at least 2000 birds and two years of experience in broiler farming were selected, randomly, from the respective list. This makes total sample size of 120 broiler farmers (60 contract and 60 non-contract). Problems faced by contract broiler farmers were categorized into categories as problems in receiving inputs, problems in marketing of outputs and problems in services and payment. Whereas problems faced by non-contract broiler farmers were grouped as problems in purchasing of input and problems in marketing of output. The data was collected with the help of a pre-tested structured interview schedule and results were presented in terms of frequency and percentage.

RESULTS AND DISCUSSION

Age

The data given in the table 1 reveals that pooled mean age of broiler farmers was 38.18 years. The average age of the contract broiler farmers and non-contract broiler farmers were 36.15 and 40.21 years,

respectively. It is evident from the table that maximum percentage of respondents (53.33%) were young, followed by middle (30.83%) and old age category (15.83%). In case contract broiler farming majority of the respondents (60%) were belonging to young age category as compared non-contract broiler farming (46.67%). But percentage of respondents in middle (26.67%) and old (13.33%) categories of contract broiler farmers were lower in comparison to middle (35%) and Old (18.33%) category non-contract broiler farmers. Ramaswami *et al.* [14] also reported similar findings as average age of the farmers engaged in contract and non-contact broiler farming were 36 ad 39 years, respectively. Babu [3] and Pratap [13] also reported that majority of the farmers engaged in poultry farming belongs to young age group. The independent sample t-test analysis revealed that there was significant difference between C.B.F farmers and N.C.B.F farmers with respect to age.

Table 1: Distribution of broiler **farmers according to their age**

Age (in years)	C.B.F (n=60)	N.C.B.F (n=60)	Pooled (N=120)
Young (20-34)	36 (60)	28 (46.67)	64 (53.33)
Middle (35-48)	16 (26.67)	21 (35)	37 (30.84)
Old (49-62)	8 (13.33)	11 (18.33)	19 (15.83)
Mean±SD	36.15±10.70	40.21±9.37	38.18±10.03
t-test value		2.21*	

Figures in the parenthesis indicate percentage. * Significant at 5% level of significance

Education

Table 2 reveals that 25 per cent broiler farmers under contract broiler farming system were graduate, followed by intermediate (23.33%), high school (20%), middle (16.67%), post graduate (5%), primary (5%) and illiterate (5%). While under non-contract broiler farming system 50 per cent farmers fallen in two categories i.e intermediate (25%) and high school (25%) and the rest 50 per cent were belonged to middle and graduate (16.67%) each, primary (10%), illiterate (4%). None of the poultry farmer was post graduate. Overall, 24.16 per cent poultry farmers were having education up to intermediate, followed by high school (22.5%), graduate (20.83%), middle (16.67%), primary (7.5%), and post graduate (2.5%), 5.83 per cent were illiterate.

Table 2: Distribution of broiler **farmers according to education**

Education	C.B.F (n=60)	N.C.B.F (n=60)	Pooled (N=120)
Illiterate	3 (5)	4 (6.66)	7 (5.83)
Primary	3 (5)	6 (10)	9 (7.50)
Middle	10 (16.67)	10 (16.67)	20 (16.67)
High School	12 (20)	15 (25)	27 (22.5)
Intermediate	14 (23.33)	15 (25)	29 (24.17)
Graduate	15 (25)	10 (16.67)	25 (20.83)
Post Graduate	3 (5)	0 (0.0)	3 (2.5)

Religion

Table 3 reveals that more than fifty per cent of the contract broiler farmers belonged to Muslim religion followed by Hindu (46.67%). While in case of non-contract broiler farming systems 55 per cent of the poultry farmers belonged to Muslim religion and rest 45 per cent were Hindu. Overall, 54.17 per cent of the broiler farmers in the study area were Muslim, followed by Hindu (45.83%). Pratap [13] also reported the similar findings.

Table 3: Distribution of broiler farmers, according to their religion

Religion	C.B.F (n=60)	N.C.B.F (n=60)	Pooled (N=120)
Hindu	28 (46.67)	27 (45)	55 (45.83)
Muslim	32 (53.33)	33 (55)	65 (54.17)

Figures in the parenthesis indicate percentage.

Caste

The data given in the table 4 reveals maximum percentage (56.67%) of contract broiler farmers belonged to OBC caste followed by general. While under non-contract broiler farming system 56.67 per cent respondents were found to OBC caste category, followed by general (40%) and SC (3.33%). On overall basis also 56.67 per cent of the broiler farmers were under OBC caste category, followed by general (39.17%) and SC (4.17%). Babu [3] and Pratap [13] reported the similar findings.

Table 4: Distribution of broiler farmers, according to caste

Caste	C.B.F (n=60)	N.C.B.F (n=60)	Pooled (N=120)
General	23 (38.33)	24 (40)	47 (39.17)
OBC	34 (56.67)	34 (56.67)	68 (56.66)
SC	3 (5.00)	2 (3.33)	54 (4.17)

Figures in the parenthesis indicate percentage.

Family Type

The table 5 shows that majority (66.67%) of the contract broiler farmers belonged to nuclear family type, followed by joint family (33.33%). While 63.33 per cent non-contract broiler farmers belonged to nuclear family and the rest 36.67 per cent belonged to joint family system. Overall, majority (65%) of the broiler farmers having nuclear family, followed by joint family (35%). Khan [9], Mandal *et al.* [10], and Babu [3] also reported the similar findings.

Table 5: Distribution of broiler farmers, according family type

Family type	C.B.F (n=60)	N.C.B.F (n=60)	Pooled (N=120)
Nuclear	40 (66.67)	38 (63.33)	78 (65)
Joint	20 (33.33)	22 (36.67)	42 (35)

Figures in the parenthesis indicate percentage.

Family Size

Table 6 reveals that the mean family size of contract and non-contract broiler farmers was 8.45 and 9.13, respectively. While, on pooled basis the mean family size was 8.79. The study further reveals that less than fifty per cent of the broiler farmers (48.33%) under contract broiler farming system had medium family size (7-11 members) followed by small (38.33%) and large (13.34%). While in case of non-contract broiler farming system more than fifty percent of the broiler farmers(53.33%) had medium family size, followed by small (30%) and large (16.67%). Overall, about fifty per cent of the broiler farmers (50.83%) had medium family size, followed by small (34.17%) and large (15%). Mohanraj and Manivannan [11] also reported similar findings.

Table 6: Distribution of broiler farmers, according to family size

Family size (in number)	C.B.F (n=60)	N.C.B.F (n=60)	Pooled (N=120)
Small (up to 7)	23 (38.33)	18 (30)	41 (34.17)
Medium (7-11)	29 (48.33)	32 (53.33)	61 (50.83)
Large (above 11)	8 (13.34)	10 (16.67)	18 (15.00)
Mean±SD	8.45±2.96	9.13±2.67	8.79±2.81

Figures in the parenthesis indicate percentage.

Occupation

Table 7 indicates that fifty per cent contract broiler farmers (50%) had agriculture as their primary occupation followed by broiler farming (30%), business (16.67%) and service (3.33%). While maximum percentage of non-contract broiler farmers (56.67%) had agriculture as their primary occupation followed by broiler farming (25%), business (15%) and service (3.33%). None of the contract and non-contract broiler farmers had animal husbandry as their primary occupation. As far as the secondary occupation is concerned, majority of the contract (70%) and non-contract broiler farmers (58.33%) had broiler farming as their secondary occupation, followed by agriculture (16.67 and 15%), business (both 3.33%) and service (3.33 and 1.67%) animal husbandry (6.67 and 21.67%), respectively. Ramaswami *et al.* [14] and Kalamkar [8] also reported the similar findings.

Table 7: Distribution of broiler farmers, according to their occupation

Occupation	Primary		Secondary	
	C.B.F (n=60)	N.C.B.F (n=60)	C.B.F (n=60)	N.C.B.F (n=60)
Agriculture	30 (50)	34 (56.67)	10 (16.67)	9 (15)
Poultry farming	18 (30)	15 (25.00)	42 (70.00)	35 (58.33)
Business	10 (16.67)	9 (15.00)	2 (3.33)	2 (3.33)
Services	2 (3.33)	2 (3.33)	2 (3.33)	1 (1.67)
Animal husbandry	0 (00)	0 (00)	4 (6.67)	13 (21.67)

Figures in the parenthesis indicate percentage.

Land holding

Table 8 reveals that the average land holding size contract and non-contract broiler farmers were 2.72 and 3.08 acres respectively. The study also revealed that highest percentage (38.33%) of the C.B.F farmers had marginal land holding followed by small (30%), medium (20%), landless (8.33%) and large (3.33%). While, in case of non-contract broiler farming system majority of the broiler farmers (53.33%) had small land holding, followed by marginal (41.67%), medium (3.33%) and landless (1.67%). None of the non-contract broiler farmers had large land holding. Overall average land holding of broiler farmers was 2.9 acres. The broiler farmers were found to be distributed mainly in small (41.67%) marginal (40%) and medium (11.67%) land holding categories. Begum [4] also reported the similar findings.

Table 8: Distribution of broiler farmers, according to land holding

Land holding (acres)	C.B.F (n=60)	N.C.B.F (n=60)	Pooled (N=120)
Landless (0)	5 (8.34)	1 (1.67)	6 (5)
Marginal (up to 2.5)	23 (38.33)	25 (41.67)	48 (40)
Small (2.5-5)	18 (30.00)	32 (53.33)	50 (41.66)
Medium (5-10)	12 (20.00)	2 (3.33)	14 (11.67)
Large (above 10)	2 (3.33)	0 (00)	2 (1.67)
Mean±SD	2.72±.99	3.08±1.20	2.9±1.10

Figures in the parenthesis indicate percentage.

Experience in poultry farming

It is evident from the table 9 that contract and non-contract broiler farmers were 3.59 and 4.82 years respectively. The study also reveals that overwhelming majority (83.33%) of the contract broiler farmers had low experience in broiler farming, followed by medium (13.33%) and high (3.33%) level of experience. While in case of non-contract broiler broiler system maximum percentage (45%) of the farmers had medium (4-6 years) experience in broiler farming, followed by low (2-4 years, 43.33%) and high (6-8years, 11.67%) level of experience. Overall, majority (63.33%) of broiler farmers had low experience in broiler farming, followed by medium (29.17%) and high (7.5%) level. Ramaswami *et al.* [14], Gokulkrishnan [7] and Murthy *et al.* [12] also reported the similar findings. The independent sample t-test analysis revealed that there was highly significant difference between C.B.F and N.C.B.F farmers with respect to experience in broiler farming, which indicates that contract broiler farmers started poultry farming later than non-contract broiler farmers.

Table 9: Distribution of poultry farmers, according to experience in broiler farming

Level of experience (in years)	C.B.F (n=60)	N.C.B.F (n=60)	Pooled (N=120)
Low (2-4)	50 (83.33)	26 (43.33)	76 (63.33)
Medium (4-6)	8 (13.34)	27 (45.00)	35 (29.17)
High (6-8)	2 (3.33)	7 (11.67)	9 (7.50)
Mean±SD	3.59±1.4	4.82±1.45	4.21±1.43
t-test value	5.91**		

Figures in the parenthesis indicate percentage. ** = significant at 1% level of significance

CONCLUSION

The study has assessed and compares the socio-economic status of contract and non-contract broiler farmers in broiler production. Analysis of data revealed that majority of the broiler farmers belonged to young age group, having intermediate level of education, Muslim community and OBC caste. Maximum broiler farmers had nuclear family, small family size and low level of experience in broiler farming Average experience of contract broiler farmers (3.59 years) was lower than that of non-contract broiler farmers (4.82 years). Majority of the respondents possessed small land holding, agriculture as their primary and broiler farming as secondary occupation.

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