

## A Study on Socio-economic Profile of the Broiler Farmers in Mizoram

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### Abstract

Transformed from backyard rearing to commercially organized industry in last five decades, India is the second largest egg producer and third largest broiler-chicken producer in the world. Mizo people traditionally rear poultry in the backyard. Poultry production in Mizoram took turn in the late eighties with establishment of broiler farms in the state. Though there is no large scale poultry farm in Mizoram, almost 70 percent of the farmers keep poultry for subsidiary income. Though studies were abundant in other states of India, studies on broiler farming are rare in Mizoram. Keeping this in view, a research was undertaken to study the socio-economic profile of the broiler farmers to help R&D professionals to improve the situations. Two districts, Aizawl and Kolasib, were selected purposively for the based on the number of broiler farms. From each district, two development blocks and from each block five villages were selected purposively based on the number of broiler farms. Total 20 villages were selected. From each village five farmers engaged in broiler farming were selected randomly. So, the total number of respondents for the study was 100, i.e. 50 from each district. A pre-tested semi-structured interview schedule was used for data collection. The data were compiled, tabulated and analyzed using percentage, frequency and chi-square test. Results revealed that majority of the farmers were middle-aged male with middle school education living in nuclear medium size family rearing a flock of 100-1,000 birds. They always used television and newspaper. A study on extension education service need assessment of the broiler farmers is recommended.

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**Keywords:** Socio-economic profile, Broiler farmers, Aizawl, Mizoram

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### 1. Introduction

The poultry sector in India has transformed from backyard rearing to commercially organized industry in last five decades. India is the second largest egg producer and third largest broiler-chicken producer in the world (Pratab and Carin, 2015) with 69.73 billion eggs produced at the beginning of the Twelfth Five-Year Plan (Rath et al., 2015). Poultry rearing has been a traditional practice in Mizoram since time unknown. Mizo people rear poultry in the backyard on home grown feed with cheap housing made of locally available materials like woods, bamboo, etc. (Angela, 2014). However, poultry production in Mizoram has taken a new turn in the late eighties with establishment of broiler farms in various parts of the state. Though there is no large scale poultry farm in Mizoram, almost 70 percent of the farmers keep poultry for subsidiary income. The estimated number of broilers available for consumption in the state during 2012–13 was 847,763 and net meat production was 1,561 t. The per capita availability of broiler meat for the year 2012-13 was estimated at 1.39 kg year<sup>-1</sup> (Rahman, 2015). Though studies have been conducted

in other states of India, studies on broiler farming are rare in Mizoram. Keeping this in view a study was undertaken to study the socio-economic profile of the broiler farmers which may help R&D professionals to improve the situations.

### 2. Materials and Methods

Two districts, Aizawl and Kolasib, were selected purposively for the sample survey based on the number of broiler farms. From each district, two development blocks and from each block five villages were selected purposively based on the number of broiler farms. So, a total of 20 villages were selected. From each village five farmers engaged in broiler farming were selected randomly. So, the total number of respondents for the study was 100, i.e. 50 from each district. For the purpose of data collection a semi-structured interview schedule was prepared covering all the objectives which was pre-tested. Observation was judiciously done to complement and supplement data collected by interview schedule. Secondary data were collected from the published reports, statistical handbooks, economic survey reports, journals and newspapers, etc. The collected data were compiled, tabulated

and analyzed using percentage, frequency and chi-square test using Statistical Package for the Social Sciences (SPSS).

### 3. Results and Discussion

#### 3.1. Age

Table 1 shows that majority of the farmers belonged to middle age group (55%) followed by old (28%) and young age group (17%).

Table 1: Age of the respondents

Category	Year	Frequency and percentage (N=100)	Mean $\pm$ SD
Young	Up to 35	17	48.00 $\pm$ 13.67
Middle	36-50	55	
Old	51 and above	28	

$\chi^2=1.110$  at 2 df (Non-significant)

Etuk et al. (2015) reported that majority (74.5%) of the broiler farmers were in their productive age (31-50 years). Elizabeth et al. (2011) also reported that the average age of broiler farmers was 42 years in both the districts of Kohima and Dimapur in Nagaland. Borthakur et al. (2010) reported that highest number of respondents (71%) were 31-48 years old. This might be due to the fact that middle-aged people were productive and broiler farming needed active and productive people. Besides, opportunities for gainful employment in government and private sector were less at this age.

#### 3.2. Sex

Table 2 shows that majority of the respondents (64%) were male involved in broiler farming activity compared to the female counterpart (36%).

Oni et al. (2005) observed that 86% of the respondents were male and 14% were female. Elizabeth et al. (2011) reported that men dominated broiler farming activities in both Kohima (55%) and Dimapur (56%) district of Nagaland. The reason might be that broiler farming requires more attention on feeding, watering and marketing for which males were more suitable than females.

Table 2: Sex of the respondents

Category	Frequency and percentage (N=100)
Male	64
Female	36

$\chi^2=0.174$  at 1 df (Non-significant)

#### 3.3. Education

Highest number of respondents had education up to middle school (37%) followed by primary (21%), high (19%) and higher secondary (13%) school. Besides, 10% respondents were graduates, but none was illiterate (Table 3 and Figure 1).

Gogoi (2004) observed that most of the farmers (48%) had

education above high school but below graduation and

Table 3: Educational status of the respondents

Category	Frequency and percentage (N=100)	Mean $\pm$ SD
Illiterate	0	7.60 $\pm$ 4.56
Primary (class I-IV)	21	
Middle (class V-VIII)	37	
High school (class IX-X)	19	
Higher secondary (class X-XII)	13	
Graduate (Bachelor and above)	10	

$\chi^2=3.495$  at 5 df (Non-significant)

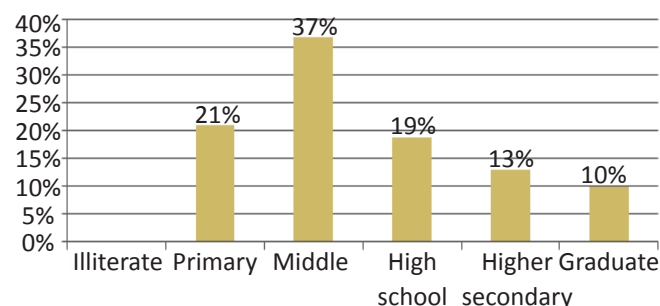


Figure 1: Educational status of the respondents

29 percent had higher education (graduation and above). Borthakur et al. (2010) reported that the educational qualification of majority (48%) of the respondents was above high school and below graduation. The possible reason might be that persons with higher education had other employment opportunities in government and private sector. Persons with medium and low education were more involved in broiler farming due to fewer opportunities in government and private sector. Further, educated persons had access to information from various sources which enabled them to become a successful farmer than the less or uneducated ones.

#### 3.4. Family size

Table 4 shows that majority of the broiler farmers (67%) belonged to medium size family (6-8 members) followed by small (up to 5 members, 17%) and large family (9 and above members, 16%).

Table 4: Family size of the respondents

Family size	Frequency and percentage (N=100)	Mean $\pm$ SD
Up to 5 (small)	17	5.00 $\pm$ 1.83
6-8 (medium)	67	
9 and above (large)	16	

$\chi^2=1.614$  at 2 df (Non-significant)

Similar finding was also reported by Oni et al. (2005) that 39 percent of the respondents had less than 6 members per household in Nigeria. Bora (1999) reported that majority of the respondents (48%) had medium family (5-6 members) followed by small family (32%, below 4 members) and large family (20%, 7 and above members). It might be due to the fact that farming required reasonable number of family members to look after the flock.

### 3.5. Family type

A look into Table 5 reveals that the majority of the broiler farmers (70%) belonged to nuclear family followed by joint (19%) and single parent family (11%).

Similar finding was reported by Borthakur et al. (2010) that majority of the poultry farmers had nuclear family. Borgohain (1993) observed that majority of the poultry farmers belonged to nuclear family (88%) and 12 percent belonged to joint family. Most of the respondents lived separately after marriage and broiler farming was being carried out by these nuclear families.

Table 5: Family type of the respondents

Type	Frequency and percentage (N=100)
Nuclear family	70
Single parent family	11
Joint family	19

$\chi^2=0.201$  at 2 df (Non-significant)

### 3.6. Occupation

Table 6 reveals that majority of the farmers were agriculturists (35%) in occupation followed by broiler farmers (27%), government servant (20%), non-agricultural labourers (11%) and craftsmen (7%).

Table 6: Occupational status of the respondents

Occupation	Frequency and percentage (N=100)
Agriculture	35
Broiler farming	27
Non-agricultural labourer	11
Craftsmanship	7
Government service	20

$\chi^2=4.717$  at 4 df (Non-significant)

Mozumdar et al. (2009) reported that 46% respondents were crop producers, 34% broiler farmers, 8% service holders and 12% businessmen, fishermen and others. However, Gogoi (2004) found that 40% of the respondents were service holders, 30% were businessmen and 20% were farmers. Only 27% farmers were involved in broiler farming as their main occupation might be due to the lack of knowledge about

broiler farming, its benefit and lack of interest. Another reason might be that people preferred piggery over broiler farming.

### 3.7. Land holding

A good number of the farmers (28%) were small land holders (1-2 ha), followed by marginal (up to 1 ha, 24%), semi-medium (2-4 ha, 22%) and medium (4-10 ha, 11%) land holders. Fifteen percent of the respondents were landless (Table 7).

Table 7: Land holding of the respondents

Family size	Frequency and percentage (N=100)	Mean±SD
Landless (No land)	15	1.75±1.70
Marginal (Up to 1 ha)	24	
Small (1-2 ha)	28	
Semi-medium (2-4 ha)	22	
Medium (4-10 ha)	11	

$\chi^2=7.916$  at 4 df (Non-significant)

According to Elizabeth et al. (2011), average land holding of the broiler farmers in Dimapur (1.75 acres) was more than that in Kohima (1.618 acres). Francis (2016) also found that most of the respondents (74%) were small land holders followed by marginal (14%), landless (8%) and medium (4%) farmers. The reason why small and marginal land holders were more in the present study might be because being a hilly area there was less opportunity to have large land holding.

### 3.8. Income

Table 8 shows that 7 percent respondents had an annual income below ₹ 63,960 (low income group) followed by 28 percent had annual income ₹ 63,960-83,066 (medium income group) and 65% had an annual income more than ₹ 83,066 (high income group).

Elizabeth et al. (2011) found that annual income from chicken rearing was ₹ 48,996 and ₹ 78,246, respectively in Kohima and Dimapur district of Nagaland. In the present study most of the respondents belonged to high income group because they had other sources of income besides broiler farming.

Table 8: Annual income of the family

Category	Frequency and percentage (N=100)
Low income (Below ₹ 63,960)	7
Medium income ( ₹ 63,960-83,066)	28
High income (Above ₹ 83,066)	65

$\chi^2=62.2523$  at 2 df (Non-significant)

### 3.9. Reason for starting broiler farming

Broiler fetched more price than *desi* birds was the reason for starting broiler farming by large number (30%) of the respondents. Faster growth and lower investment cost were

the reasons for 23% and 17% of the respondents, respectively. Easy to be managed by women and stable market were the reason for starting broiler farm for 12% of the respondents, whereas 6 percent of the respondents started broiler farming because they heard good things from their neighbors (Table 9). This might be due to the reason that job opportunity in government and non-government sector was less. Hence, people got them employed in broiler farming to complement and supplement their income.

Table 9: Reasons for starting boiler farming by the respondents

Reasons	Frequency and percentage (N=100)
Motivated by neighbour	6
Easy to be managed by women	12
Lower investment cost	17
Better price than desi birds	30
More stable market	12
Broiler grows faster	23

$\chi^2=20.261$  at 5 df (Non-significant)

### 3.10. Flock size

A look into Table 10 reveals that majority of the respondents (66%) had medium size (300-1,000 birds) followed by small size (25%, 100-300 birds) and large size (9%, 1,000 and above birds) flock.

Mozumdar et al. (2009) found that small broiler farmers (300-2,000 birds) dominated the rural areas of Mymensingh in Bangladesh. Flock size of 300-1,000 birds was very less in comparison to other states of India. It might be due to difficulty in marketing, high cost of feed, lack of transportation, and unavailability of land and space.

Table 10: Flock size owned by the respondents

Category	Frequency and percentage (N=100)	Mean $\pm$ SD
Small size (100-300)	25	688.45 $\pm$
Medium size (300-1,000)	66	374.09
Large size (1,000 and above)	9	

$\chi^2=42.172$  at 2 df (Non-significant)

### 3.11. Training

Table 11 shows that 49% of the respondents received training from the feed dealer and 7% received training from the Krishi Vigyan Kendra. None of them received training from veterinary dispensary, veterinary/agricultural university, NGOs and co-operative societies. Thus, only 56 percent of the respondents received training on broiler farming.

Elizabeth et al. (2011) found that respondents trained in Dimapur and Kohima were 18% and 13%, respectively. Borthakur et al. (2010) found that 87% of the respondents in Dibrugarh district of Assam had not undergone any formal training on poultry rearing. Overall, fewer respondents were trained which might be due to the negligence on the part of the broiler farmers and absence of cooperative society in the study area.

Table 11: Training received by the respondents

Category	Frequency and percentage (N=100)
Veterinary dispensary	0
Poultry feed dealer	49
Veterinary/agricultural university	0
NGOs	0
Cooperative societies	0
KVK	7

$\chi^2=6.253$  at 5 df (Non-significant)

### 3.12. Extension contact

Table 12 shows that 51%, 2% and 73% respondents "always" used newspaper, radio and television, respectively. However, 48 percent, 64% and 25% respondents "sometimes" used newspaper, radio and television, respectively. The respondents "rarely" used government extension worker/field worker, NGO extension worker/field worker, newspaper, radio, television and farm publication were 54%, 16%, 1%, 34%, 2% and 52%, respectively. The respondents "never" used government extension worker/field worker, NGO extension worker/field worker and farm publication were 46%, 84%, and 48%, respectively.

Fawole (2006) observed that poultry farmers in Nigeria used television (68%), veterinary personnel (52%), handbill (47%), radio (43%), farm magazine (32%), non-governmental

Table 12: Extension services used by the respondents

Extension services	Frequency and percentage (N=100)			
	Always	Some-times	Rarely	Never
Government extension worker/field worker	0	0	54	46
NGO extension worker/field worker	0	0	16	84
News paper	51	48	1	0
Radio	2	64	34	0
Television	73	25	2	0
Farm publication	0	0	52	48



organization (32%) and extension agent (26%) as their sources of information. In the present study, television and newspaper were used regularly because the respondents owned television and subscribed newspaper.

### 3.13. Farming experience

Nearly half of the respondents (48%) had long experience in broiler farming (more than 6 years) followed by 43% medium experience (2-6 years) and 5% had short faming experience of less than 1 year (Table 13).

Elizabeth et al. (2011) found that majority of the respondents (79% in Kohima and 87% in Dimapur) were engaged in poultry farming for 1-7 years. Over all experience in broiler farming was less which might be due to the fact that there was a tendency among respondents to change enterprise for want of better and stable income.

Table 13: Farming experience of the respondents

Experience (year)	Frequency and percentage (N=100)	Mean±SD
Short (Below 1)	5	3.47±2.9
Medium (2-6)	43	
Long (Above 6)	48	

$\chi^2=5.927$  at 2 df (Non-significant)

### 3.14. Financial assistance received

Only 36% of the respondents received financial assistance borrowing loan from bank, relative/friend or other sources (Table 14).

Adebayo and Adeola (2005) reported that 68 percent of the respondents were financed through personal savings and friends/relatives, whereas 32 percent were financed through the financial institutions. In the present study, few respondents took financial help mainly from Mizoram Rural Bank due to the fact that they were small farmers and did not require much financial help.

Table 14: Financial help taken by the respondent

Category	Frequency and percentage (N=100)
Received	36
Not received	64

### 3.15. Asset possession

All the respondents possessed electricity, watch and mobile phone (Table 15). Besides, they possessed fan (82%), colour television (80%), motorcycle/scooter/moped/scooty (46%), radio (39%), car (23%), landline telephone (21%), sewing machine (20%), bicycle (14%) and black and white television (3%).

Mozumdar et al. (2009) reported that possession of television, sewing machine, dining table, electric fans and mobile

Table 15: Assets possessed by the respondents

Assets	Frequency and percentage (N=100)
Electricity	100
Radio	39
Bicycle	14
Motorcycle/scooter/moped/scooty	46
Car	23
Fan	82
Watch	100
Black and white television	3
Colour Television	80
Landline telephone	21
Mobile phone	100
Sewing machine	20

$\chi^2=20.633$  at 11 df (Non-significant)

phone were increased by 170%, 88%, 109%, 84% and 79%, respectively after adopting broiler farming.

## 4. Conclusion

Majority of the farmers were middle-aged male with middle school education living in nuclear medium size family with the house electrified. Being agricultural labourers with small land holding and high annual income they were rearing 300-1,000 birds. With six years of experience in broiler farming they received training mainly from the feed dealer and watched television and read newspaper. Possessing mobile phone, fan and television they also obtained financial assistance. There is a need to assess extension education service need of the broiler farmers.

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