SOCIO-ECONOMIC CONDITION OF POULTRY FARMERS AT SITAKUND UPAZILLA UNDER CHITTAGONG DISTRICT IN BANGLADESH

**ABSTRACT**

 The study was conducted to identify the socio-economic status of the poultry farmers in Sitakund Upazilla under Chittagong district in Bangladesh. Total 20 poultry farms were selected from Sitakund upazilla under Chittagong district. The mean farm size (Number of bird), number of batch per year, age of the farmer, amount of land (acre) per farmer were 2305.026$\pm $2176.25, 7.52$\pm $1.07, 34.6$\pm $6.73, 3.51$\pm $0.4 with range 1000-10000, 6-10, 25-46, 0.2-5.6 respectively in broiler farm. This study revealed that comparatively rich farmers are more involved in farming. Incase of education level, the percentage of illiterate farmer is lower (5%) and percentage of high educated (Graduation)farmers are maximum (35%). Among 20 broiler farm, per batch average total income was 175600 taka whereas minimum income was 190700 taka and maximum was 1263000 taka, per batch **a**verage **t**otal **c**ost was 238573.7 **t**aka whereas minimum cost was 105000 **t**aka and maximum cost was 934000 **t**aka. Per batch average total profit was 90573.68 taka whereas minimum was 17000 taka and maximum was 329000 taka and per year average total profit was 349105.3 taka whereas minimum was 70000 taka and maximum was 1500000 taka. Hence it is revealed that broiler farming is profitable.

**Key words:** Poultry farming, Socio-economic condition, education

**Chapter – I**

**INTRODUCTION**

Bangladesh is a densely populated developing country and its economy is very much dependent on agriculture. Poultry is a part of agricultural farming system in Bangladesh. Even though raising poultry birds is mostly a subsistence practice in Bangladesh. The contribution of poultry production is vital to the national economy in case of generating employment opportunity, additional income for households and improving the nutritional level of the people. Poultry rearing is suitable for widespread implementation as it cost less, requires little skills, is highly productive and can be incorporated into the household works **(Dolberg *et al.*, 1997). ).** In the last few years, the recognition of small-scale commercial poultry production helps to accelerate the pace of poverty reduction riding in new height in Bangladesh. The poultry industry has been successfully becoming a leading industry of the country. The sector is also growing rapidly for last two decades though it started farming during mid sixty in this country. It has already capable to rise at an annual growth of around 20 per cent during last two decades. This industry has immense potentialities from the point of view of the economic growth of the country as well as fulfillment of basic needs and to keep the price at a minimum level and ensuring food especially animal protein for the human being. This industry has immense scope for the country through changing livelihood & food habit, reduction of dependence of meat related to cow and goat and ultimately has positive impact on GDP growth rate of the country.

Broiler farming plays an important role in improving livelihood, food security and poverty alleviation in rural and semi-urban communities in developing countries including Bangladesh. Broiler production has become a specialized and speedy business at present time for the people of the country due to short life cycle of the broiler and requirement of relatively less amount of capital attributed to its popularity to the farmers **(Ahmed *et al*., 2009)**. **)**. A study report on the impact on Smallholder Livestock Development Project (SLDP) in rural community at different rural areas of Bangladesh revealed that the overall socio-economic condition of the beneficiaries, their egg and meat consumption capability, empowerment of rural women in decision making issues and employment opportunities were significantly increased after the intervention made by SLDP **(Alam, 1997)**. Another study showed that commercial broiler farming provided employment opportunities for unemployed family members, improved socio-economic conditions and increased women empowerment among rural people of Bangladesh **(Rahman *et al*., 2006).** Broiler meat contains high quality protein and micro-nutrients which has had a tremendous impact on health and nutrition for the poor people in rural areas **(Neumann *et al*., 2002; Barroetoa, 2007)**. Again, another study reported that it can be the main source of family earning or can provide sufficient income and gainful employment opportunity to rural farmers throughout the year **(Bhende, 2006).** For this reason, broiler farming has been playing a key role in providing meat to overcome the malnutrition and serve as a tool for employment generation and poverty alleviation **(Raha, 2007).**

Though broiler farming faces various problems, a huge scope exists for development of broiler industry in Bangladesh. It is interesting to note that broiler farming is solely in the private sector particularly in the hands of small farmers who are running their enterprise through self-finance. So it is very much necessary to assess whether broiler farming is contributing positively for the socio-economic development of the broiler farmers or not.

The district Chittagong occupies an important place in Bangladesh in respect of poultry farming because of availability of all facilities. It is called the poultry belt of Bangladesh. So, the present study was undertaken to identify the socio-economic status of the poultry farmers and economic analysis of poultry farming (broiler) in Chittagong district of Bangladesh.

Therefore this study was undertaken at **Sitakund Upazilla Under Chittagong district**  with the following objectives**:**

 **1)**To know the socio-economic status of the poultry farmer.

 **2)**To study the management pattern of broiler farming.

 **3)**To estimate the cost and profit from broiler farming**.**

**Chapter-II**

**MATERIALS AND METHODS**

**2.1 Study area** and **Study period:**

The study was conducted at Sitakund Upazilla Under Chittagong district in Bangladesh between the periods of16July, 2016 to16 September, 2016.

**2.2 Selection of study Area:**

The area was selected from Unions of Sitakund Upazilla under Chittagong district in Bangladesh . The area was selected because of no study of this type was conducted previously in this area.

**2.3 Preparation of the survey schedule:**

The survey was developed in accordance with the objectives of study. Survey schedule was prepared to get the desired information from the poultry farm owner. The data was collected by visiting of farm to farm.

**2.4 Population and sample size :**

All the poultry farms of Sitakund Upazilla engaged in poultry production were considered as population and a sample size of 20 poultry farms were selected.

**2.5 Sampling methods :**

Sitakund upazilla under Chittagong district were selected in bias (Non-random selection). Sitakund upazilla has eight unions. From these union five unions was randomly selected and from these five unions two villages from each union was randomly selected (Multi-stage random sampling). From these selected villages two farms of each category (Broiler and Layer) were selected randomly (Stratified random sampling). Each farm rearing at least 1000 bird is taken under consideration.

**2.6 Method of data collection:**

Data were collected through direct interview from the farmer by setting a designed questionnaire on broiler rearing and additional data were collected by face to face or personel contact.

**2.7Analytical techniques:**

The data were put on the master sheet in Microsoft Office Excel 2007 and were arranged in tabular form.The obtained data imported to software STATA/IC-13.0 for analysis.Descriptive statistics (i.e. means, frequencies etc) was done to estimate the different variables. Unpaired unequal t-test was used to determine the level of significance (*p<0.05* and *p<0.01*) between categorical variables ( **Uddin *et al.,* 2012** ).

**Chapter-III**

**RESULTS AND DISCUSSION**

**3.1 General description of the farm:**

**Table 3.1**: Analysis of different parameters related to farms and farm owners (N=20)

|  |  |
| --- | --- |
| **Parameters** | **Total farm (N=20)** |
|  **Mean**$\pm $ **SE** | **Range****(Minimum-Maximum)** |
| Farm size (Number of bird) | 2305.026$\pm $2176.25 | 1000-10000 |
| Number of batch per year |  7.52$\pm $1.07 |  6-10 |
| Age of the farmer (year) | 34.6$\pm $6.73 |  25-46 |
| No. of family member | 5.95$\pm $1.39 |  4-9 |
| Amount of land per farmer (acre) | 3.51$\pm $0.4 | 0.2-5.6 |

The **Table 3.1** revealed that the mean farm size (Number of bird),Number of batch per year, age of the farmer, no.of family member, amount of land (acre)per farmer were 2305.026$\pm $2176.25, 7.52$\pm $1.07, 34.6$\pm $6.73, 5.95$\pm $1.39, 3.51$\pm $0.4 with range Minimum1000 bird and maximum 10000 bird, minimum 6 batch and maximum 10 batch, minimum 25 years and maximum 46 years, minimum 4 member and maximum 9 member, minimum 0.2 acre and maximum 5.6 acre with respectively in poultry farm. **Islam *et al.,* (2010)** found per farmer have 0.49 acre and **Devendra, (1993)** showed 0.99- 1.97 acres of land per farmer.

**3.2 Socio-economic condition of the farmers:**

Different factors associated with socio-economic condition of the farmers of Sitakund Upazilla are listed in **Table 3.2** and specific findings of the study also describe below:

**Table 3.2**: Factors associated with socio-economic status of the farmers in Sitakund Upazilla (N=20).

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **Categories** | **No. of farm/****Farm owner**  | **Percentage (%)** |
| Type of farmer | Landless (0.00-0.50 acre) | 1 | 5 |
| Small (1.25-2.47acre) | 3 | 15 |
| Medium (2.48-4.94 acre) | 5 | 25 |
| Large ($\geq $ 4.95 acre) | 11 | 55 |
| Number of birds | $<$ 2000 | 8 | 40 |
| 2000-5000 | 9 | 45 |
| $>$ 5000 | 3 | 15 |
| Farming is main occupation | Yes |  18 |  90 |
| No | 2 |  10 |

**In Table 3.2** The result showed that About 55% large, 25 % medium, 15 % small and 5% landless farmers were involved in farming in Sitakund upazilla of Chittagong district **(Table 3.2).** These findings agree with the study of **Rahman *et al*., (2002)** in Rajshahi district. These findings indicate that, in this sector, comparatively rich farmers are more involved than poor, although **Islam *et al*., (2010)** reported that all of the farmers involved in the farming are small categories (Having 6-49 decimal land).

 The size of the farm reflects the socio-economic status of the farmer. About 40% of the farmers have less than 2000 birds, 45% have 2000-5000 birds and 15% have more than 5000 birds.

The present study shows that, farming is the main occupation of 90% of the farmers involved in the study and for remaining 10%, it is subsidiary occupation. **Ahmed *et al.,* (2009)** showed that, farming is the main occupation of the 35% of the broiler farmer. This higher value in my finding is due to involvement of broiler in my study but **Ahmed *et al*., (2009)** did not consider layer farmers.

**3.3. Education level of the farmers:**

**Table 3.3**Education level of the farmers (N=20)

|  |  |  |
| --- | --- | --- |
| **Education levelof Farmers** | **No. of farmers** | **Percentage(%)** |
| Illiterate |  1 | 5 |
| Primary |  1 | 5 |
| Below SSC |  2 | 10 |
| SSC |  4 | 20 |
| HSC |  5 | 25 |
| Graduation |  7 | 35 |
| Total |  20 | 100 |

The literacy level of the farmers have been grouped into six educational group according to **Sumy *et al.,*( 2010).** The **Table 3.2** shows the education level of the farmers. There were found 5% farmers were illiterate, 5% farmer had education level of primary, 10% Below SSC , 20% farmers had education level of SSC ,25% farmers had education level of HSC and 35% were Graduate. These findings are agreement more or less with **Sumy *et al*., (2010)** that were in a study on backyard chicken owners.

**3.4 Economic analysis:**

**Table 3.4** Total cost of poultry production per batch (N=20)

|  |  |
| --- | --- |
|  **Cost items** |  **Total farm (N=20)** |
|  **Mean**$\pm $ **SE (Taka)** |  **Range****(Minimum-Maximum)** **(Taka)** |
| Per Day Old Chick purchasing cost (Taka) | 29.1$\pm $7.25 | 21-50 |
| Total Day Old Chick purchasing cost(Taka) |  84035$\pm $100714 | 21000- 250000 |
| Feed Cost (Taka) |  129486.8$\pm $94189.15 | 55900-304000 |
| Labour Cost (Taka) |  6307.69$\pm $1797.43 | 4000-10000 |
| Medicine Cost (Taka) |  6131.57$\pm $2120.28 |  2000-10000 |
| Electricity Cost (Taka) | 1463.15$\pm 482.13$ |  1000-3000 |
| Litter Cost (Taka) | 3947.36$\pm 1129.09$ |  3000-7000 |
| Total Cost (Taka) per batch | 238573.7$\pm 180909.4$ |  105000-934000 |

**In Table 3.4** Th**e** result showed that **a**mong20 broiler farm, per batch average per Day Old Chick purchasing cost was 29.1 taka whereas minimum rate was 21 taka and maximum rate was 50 taka. Per batch average Total Day Old Chick purchasing cost was 84035 taka whereas minimum was 21000 Taka and maximum was 250000 Taka. Per batch average Feed cost was 129486.8 taka whereas minimum was 55900 taka and maximum was 304000 taka .Per batch average labour cost was 6307.69taka whereas minimum was 4000 taka and maximum was 10000 taka. Per batch average medicine cost was 6131.57 taka whereas minimum was 2000 taka and maximum was 10000 Taka. Per batch average electricity cost was 1463.15 taka whereas minimum was 1000 taka and maximum was 3000 taka. Per batch average litter cost was 3947.36 taka whereas minimum was 3000 taka and maximum was 7000 taka. So, incase of 20 farm, per batch average total cost was 238573.7 taka whereas minimum cost was 105000 taka and maximum cost was 934000 taka. **Alam, J., (1997)** found the cost per bird was BDT. 106.68 for intensive farm. The higher value of cost in my study due to recent increase of price of feed and other raw materials.

**Table 3.5 Total profit of poultry production(N=20)**

|  |  |
| --- | --- |
|  **Parameters** | **Total farm (N=20)** |
|  **Mean**$\pm $ **SE (Taka)** |  **Range** **(Minimum-Maximum)**  **(Taka)**  |
| Total income per batch (Taka) | 175600$\pm $985600.4 |  190700-1263000 |
| Total profit per batch (Taka) | 90573.68$\pm $116410.5 |  17000-329000 |
| Total profit per year (Taka) | 349105.3$\pm 510056.1$ |  70000-1500000 |

**In Table 3.5**The result showed that, among 20 broiler farm, per batch average total income 175600 taka whereas minimum income was 190700 taka and maximum was 1263000 taka, Average total profit was 90573.68 taka whereas minimum was 17000 taka and maximum was 329000 taka and per year average total profit was 349105.3 taka whereas minimum was 70000 taka and maximum was 1500000 taka.

**CONCLUSION**

From the above discussion it can be concluded that Sitakund Upazilla under Chittagong district is a very suitable and prospectious zone for poultry farming and broiler production. Although poultry farming is an important segments of agriculture. At present, a large number of educated unemployed persons are related to poultry farm. These sectors play important role to solve poverty, unemployment and malnutrition problem.During my study period, some problems and difficulties were found in poultry production. To overcome the difficulties of poultry rising and to make poultry production more profitable in the country as well as uplifting the socio-economic status of the farmers, some recommendations are put forward for the improvement of existing production of poultry. Regular vaccination is a prerequisite for any improvement in poultry production. Necessary steps should be taken to reduce the losses from diseases. Availability of day old chicks should be ensured. The government and non-government organizations should play vital role in making provisions for chicken’s feed in the country, so that the chickens raiser can purchase feed with reasonable price. Farmers should establish the biosecurity cheek list, establishment standard for each of the cheek points, strictly maintaining these points and regular correction and standardization of biosecurity steps. From my study, in economic analysis the broiler farming was found more profitable. This study recommends the farmers to establish broiler farm for more profit. So, by my study, I would like to request the literate, elite and rich persons dealing with animals, authority concerned and ultimately government to take proper steps and play an important role for establishment of a poultry zone in this area by solving the all problems and giving more opportunities for the existing farm owners.

**LIMITATION**

There were some limitations in my study. The study period was limited and study area was restricted to a particular upazilla, for this reason the findings may not reflect the whole country. There was limited recording system in goat farms under study as a result it was difficult to select valid data. Moreover, Even, interviews were not always right person who involved with rearing of poultry directly. Some of the farmers were not cooperative to give information.

**REFERENCES**

Ahmed, J.U., Mozumdar, L., Farid, K.S. and Rahman, M.W. 2009.Broiler farming: An approach to improve rural livelihood.*Journal of Bangladesh Agricultural University*, 7(2): 395-402.

Alam, J. 1995. Livestock resources in Bangladesh: Present status and future potential. University Press Limited, Dhaka, Bangladesh.

Alam, J. 1997. Impact of small holder livestock development project in some selected areas of rural Bangladesh. *Livestock for rural developmemt, 9 (3).*

Barroetoa, A.C. 2007. Nutritive value of poultry meat: relationship between vitamin E and PUFA. *World Poultry Science Journal*, 63.

Bhende, M.J. 2006. Production and cost of broiler meat: A case study of Karnataka. Agricultural Development and Rural Transformation Centre, Institute for Social and Economic Change, Bangalore, India.

Devendra, C. 1993 .Sustainable Animal Production from Small Farm Systems in South -East Asia.FAO Animal Production and Health Paper, 106.

Dolberg, F., Jensen, H.A., Sorensen, P. and Rahman, M. 1997. Exotic hens under semi scavenging conditions in Bangladesh**.** **[Livestock Research for Rural Development](http://www.fao.org/ag/aga/agap/frg/afris/espanol/document/lrrd/LRRD9/3/CONT93.HTM),** 9(3).

Islam, M.S., Takashi, S. and Chhabi, K.Q.N. 2010.Current Scenario of the Small-scale Broiler Farming in Bangladesh: Potentials for the Future Projection**.** *International Journal of Poultry Science*, 9 (5): 440-445.

Neumann, C., Harris, D.M. and Rogers, L.M. 2002.Contribution of animal source foods in improving diet quality and function in children in the developing world.*Nutrition Research,* 22(1): 193-220.

Raha, S.K. 2007. “Broiler industry in Bangladesh: some issues”. *Proceedings of the fifth International Poultry Show and Seminar*, Organized by World’s Poultry Science Association, Bangladesh Branch, Dhaka, Bangladesh.

Rahman, M. M., Islam, M.R., Ullah, M.N., and Adeyl, F.M.M. 2002. Study on the Scientific Knowledge and Managemental Skill in Commercial Broiler Farming Programme at the Farmers Level of Rajshahi District. *OnLine Journal of Biological Sciences*, 2(11): 767- 768.

Rahman, S.M.A., Sayeed, M.A., Sarker, N.R. and Alam, J. 2006. Impact of improved poultry management technique on socio-economic condition of broiler beneficiaries.*Journal of Bangladesh Agricultural University*, 4 (2): 401-411.

Sumy, M.C., Khokon, M.S.I., Islam, M.M. andTalukder, S. 2010. Study on the socio-economic condition and productive performances of backyard chicken in some selected areas of Pabna district. *Journal of Bangladesh Agricultural University*, 8(1): 45-50.

Uddin, M. N., Uddin, M. B., Mamun, M., Hassan, M. M. and Khan, M. M. H. 2012.Small Scale Dairy Farming for Livelihoods of Rural Farmers: Constraint and Prospect in Bangladesh. *Journal of Animal Science Advances,* 2(6): 543-550.

**APPENDIX**

**QUESTIONNAIRE**

 ID NO : Date:

**A) Information about farm owners :**

1.Name of the owner : …………………………….. 2. Age: …………………………..

3.Address: ……………………………………………...................................................

4. Occupation : a) Farmer b) Employee c) Business

5. Education level: a) Primary b) Below SSC c) SSC d) HSC e) Graduation f) Illiterate

6. Family Member: …………………………………………….

7. Amount of Land : ……………………………………………

8. Farm starting period: …………………………………………

9. If any other farm: a) Yes b) No

10. If yes, Type of farm : ………………………………………..

**B) Information about farm:**

1. Name of the farm: …………………………………………….

2. Location of the farm : …………………………………………

3. Type of housing : ………………………………………………

**Placement :**a) South facing, b) North facing, c) East facing, d) West facing.

**Design :** a) Gable type, b) Shed type, c) Combination type

**Materials:** a) Bamboo. b) Tin, c) Wood, d) Brick

**Floor Type:** a) Concrete b) Mud.

 4. Type of farm: a) Broiler b) Layer c)other

 5. Name of strain: …………………………………..

 6. In case of broiler farm, number of batch : ………………….

 7. Each batch number of bird: ……………………………………

 8. Total number of bird : …………………………………………

 9. Number of shed : ………………………………………………

 10. Labournumber : ……………………………………………..

 11. Farm Biosecurity : a) Yes b) No

 12. Type of litter : ………………………………………………

 13. Vaccination : ………………………………………………...

**C) Information about Poultry:**

 1. Number of bird : …………………………………………..

 2. Average weight : ………………………………………….

 3. Selling time : ………………………………………………

 4. Type of feed : ……………………………………………..

 5. Quantity of feed : ………………………………………….

 6. Market price of broiler( per kg) :………………………….

 7. Incidence of disease : ………………………………………

 8. Mortality rate : ……………………………………………...

**D) Information about Total Variable Cost (per batch):**

 1.Per Day Old Chick purchasing cost: …………………………

 2. Total Day Old Chick purchasing cost : ………………………

 3. Feed cost : ……………………………………….

 4. Medicine cost : …………………………………..

 5. Labour cost : ……………………………………..

 6. Electricity cost : ………………………………….

 7. Any loan for farming from bank ? : a) Yes b) No

 8. Amount of loan : …………………………………

 9. Total Cost : ……………………………………….

**E) Information about Total income &Profit :**

 1) Per batch total income : ……………………………

 2) Per batch total profit : ……………………………..

 3) Are you profitable by farming : a) Yes b) No

 4) Total profit per year : ……………………………….

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The Author

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**BIOGRAPHY**

I am Priyanka Chowdhury, daughter of Mr. Dutjati Chowdhury and Mrs. Shikha Rani Debi. I am native to Chittagong. I passed Secondary School Certificate Examination in 2008 (G.P.A-5.00) followed by Higher Secondary Certificate Examination in 2010 (G.PA-5.00). Now I am an Intern Veterinarian under the Faculty of Veterinary Medicine in Chittagong Veterinary and Animal Sciences University. In the future, I would like to work as a veterinary practitioner and do research on clinical animal diseases in Bangladesh.