CHAPTER-I

**INTRODUCTION**

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# INTRODUCTION

# 1.1 Background of the Study

Bangladesh is an agro-based emerging country, hence agricultural expansion and sustainability are essential for economic success and interestingly poultry is an important livestock sub-sector that supplies affordable, high-quality animal protein to the nation (Uddin et al. 2014). At present there are about 23.39 million cattle, 0.8 million buffaloes, 32.19 million goats, 1.09 million sheep, 134.28 million poultry and 13.57 million duck (Online source). A report in The Business Standard states that there are 90,000 chicken farms registered in Bangladesh. However, many more are not registered. These groups are labeled as large industrial farms, medium farms, and small farms. There are four types of poultry birds’ layer, broiler, sonali and indigenous are very familiar in Bangladesh both for meat and egg production. However, more than 58.39 percent of the total chickens in Bangladesh are broiler breeds. There are currently over 53,000 broiler farms in Bangladesh. In addition, Sonali chickens account for 28% of the country’s chickens. (Online source)

From the economic point of view the importance of poultry is very significant. Broiler, in fact has a shorter life cycle and its production requires relatively less capital, and land compared to other meat producing animals such as bullocks, sheep, and goats. A good number of educated people are now involved in poultry farming business/enterprises in both broiler and sonali at Narsingdi district. Both have a shorter life cycle and good market demand. Recently Sonali chicken farming came under commercial enterprise and became very popular to the consumers in Bangladesh. But it may vary significantly in terms of revenue and taste of preference as a source of quality meat production.

Individuals of Bangladesh are honored with an assortment of rural assets of which chicken raising is considered to have potential both for destitution mitigation and food creation (Sumy et al., 2010). Poultry area has ended up being promising unique area with gigantic potential for quick destitution decrease. This area all in all has shown development pace of about 2.8 percent every year over the nineties (PRSP, 2004). In this way, broiler farming assumes a significant part in further developing work, food security and destitution mitigation in rustic and semi-metropolitan networks in non-industrial nations including Bangladesh.

Broiler production has turned into a specific and expedient business at present an ideal opportunity for individuals of the country. Short life pattern of the broiler and prerequisite of generally less measure of capital credited to its prevalence to the ranchers. This industry has massive possibilities according to the perspective of the monetary development of the nation just as satisfaction of essential requirements and to keep the cost at any rate level and guaranteeing food particularly creature protein for the individual. This industry has tremendous extension for the country through changing work and food propensity, decrease of reliance of meat identified with cow and goat and at last decidedly affects GDP development pace of the country (Ahmed et al.,2009).

On the other hand, Sonali chicken, the crossbred of Fayoumi female and RIR (Rhode Island Red) male developed in 1986, has been reported to perform better with respect to egg and meat production, rapid growth and low mortality under scavenging, semi-scavenging and intensive farming system. It has been taking its place besides the indigenous hens due to its adaptability and acceptability in the climatic conditions of Bangladesh (Uddin et al., 2014). Sonali, with a phenotypic appearance similar to local chicken has higher market demand than exotic breed.

Study showed that business broiler farming gave work freedoms to jobless family people, created financial conditions, and expanded ladies strengthening among rustic individuals of Bangladesh (Rahman et al., 2006). Grill cultivating has empowered individuals of various segments like little ranchers, landless workers and taught jobless just as for industrialists to set up oven ranches on little &large scale. The better development execution of grill bird may just be a component of higher feed consumption. Feed utilization pursued comparative direction to that of weight acquire. These non-critical contrasts in development exhibitions support the finding of Haque and Chowdhury (1994), Anisuzzaman and Chowdhury (1996) and Ozturk et al (1998). Finding so the investigations unmistakably demonstrate that all broiler and Sonali farmer made great benefit and the enormous homesteads, in any case, conveyed minimal higher benefit.

Studies revealed that most of the broiler farm owners suffered from adequate amount of credit to run their farms and provision of credit for poultry farming is not yet very regular and well-established practice among all the financial institutions - banks and NGOs in Bangladesh (Jabbar et al., 2005) and this credit problem was also noticed for them who have Sonali bird farm. So, broiler and Sonali farm owners face various problems like shortage, high price and poor quality of DOC (Day-old chick); high price, poor quality and unavailability of feeds; high cost and low quality of medicine, vaccine and veterinary services shortage of capital; inadequate marketing facilities; and poor transportation and communication (Raha, 2007).

The climate of Bangladesh is suitable for broiler and Sonali farming, so both type birds can be raised easily to fulfill daily requirements of nutrient value. Both has shorter life cycle and its production requires less capital compared to other meat producing animals. The demand of broiler meat to young people and in addition Sonali meat have been increasing day by day. Most of the people, irrespective of caste and religion, prefer chicken. As a result, the market value of broiler and Sonali remain at a standard level almost all over the year. Observing the situation of high price and demand in home market, a tendency to establish a small-scale commercial farm has grown among people both in rural and urban areas. Therefore, poultry farming is shaping up as an industry. Many NGOs have come forward to give them assistance for setting up small poultry farm. However, the number of poultry farm is not increasing as rapidly as it was expected because of many reasons.

**1.2 Aim and Objectives of the Study**

The aim of this study is to analyze the present socio-economic condition of broiler and Sonali farmers and their economic analysis at Narsingdi District. This study aims to provide information about cost of production and return on poultry farming.

**The specific objectives of the study are as follows**

1. To describe the general farm characteristics and socioeconomic profiles of the farm owners.
2. To assess the production and performances indicators of the studied broiler and sonali chicken farming system.
3. To find out the comparative farm profitability between broiler and sonali chicken farming system.

# 1.3 Justification of the Study

Narsingdi district is a combination of agriculture and industry. In this district, some places have loam soil, and some places have clay soil due to which agricultural production in arid soil areas. As a result, lots of poultry farms are coming up. Besides, this district is near to capital Dhaka. So, communication system is good. There is a positive attitude among the farmers to build farms. So, the present study under taken comparative socioeconomic analysis of broiler and sonali chicken production system at some selected areas in Narsingdi district

# Also as globally, poultry production provides high-quality, affordable animal protein, a high chance for investment, job opportunities, and a source of income for smallholders worldwide. It provides quality meat especially Broiler and Sonali chicken which are highly nutritive value with high in protein. It provides source of income and opportunities of employment at poultry farms, poultry processing unit, meat and egg marketing channels etc. Quick returns can be expected from the investment in this sector. Now a day Broiler is replacing day by day at my study area due to high demand of Sonali Chicken both in urban and peri-urban areas by replacing high valued local chicken. There have no enough study on analyses of comparative profitability of poultry farming practices in the respective study areas. So this study results will be partially helpful to policy maker for taking decision in policy making in the poultry sector in Bangladesh.

CHAPTER-II

**REVIEW OF LITERATURE**

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# REVIEW OF LITERATURE

**2.1 Broiler strain**

A broiler is any chicken (*Gallus gallusdomesticus*) that is bred and raised specifically for meat production (Bhuiyan, 2003). Most commercial broilers reach slaughter weight between four (Bessei, 2006) and seven weeks of age, although slower growing breeds reach slaughter weight at approximately 14 weeks of age. Typical broilers have white feathers and yellowish skin. Broiler or sometimes broiler-fryer is also used sometimes to refer specifically to younger chickens under 2.0 kilograms (4.5lb), as compared with the larger roasters (Gerrard, 2019). There are very common six strains of broiler namely, ISA, Ross, Indian River, Arbor Acres, Lohmann and Hubbard. Average broilers cycles in Bangladesh range between 30-35 days depending, on on-farm conditions (level of technology applied),farming practices and market prices. Mortality rates vary between 4% (closed houses belonging to integrators) and 10% (small-scale open farms).

**2.2 Sonali strain**

As an important segment of livestock production, the sonali chicken industry in Bangladesh is considered a great avenue for the economic growth and simultaneously creates numerous employment opportunities. In addition to indigenous chicken, a crossbred of RIR x Fayoumi with phenotypic appearance similar to local chicken called ‘Sonali’ was introduced in northern part of the country through two projects called Small Holder Livestock Development Project (SLDP) and Participatory Livestock Development Project (PLDP) during 1996-2000. About 76 percent of Sonali beneficiary has improved their conditions by rearing this type of poultry (Hossen et al., 2012). Sonali chicken farming would be an excellent and appropriate way to promote the nutritional and economic security of the people living in rural, tribal and inaccessible areas in a sustainable manner.

Some researchers have been conducted about hatchability, fertility, growth rate and mortality rate of Sonali chicken and a few researches have been done on the comparative analysis of sonali chicken breed with other poultry breeds. Saleque and Saha (2013) conducted a study on production and economic performance of small scale Sonali bird farming for meat production in Bangladesh; Hossen et al. (2012) conducted a study on the problems and prospects of Sonali chicken farming in different village levels of Joypurhat district in Bangladesh; Miazi et al. (2012) examined a study on fertility and hatchability of Fayoumi and sonali chicks.

**2.3 Socio-economic status of Narsingdi district**

Narsingdi is one the most economic districts in Dhaka division contributes large amount of currency in poultry industries. Very few studies was conducted on socio-economic status of Narsingdi district like one study was reported in 2010 based on disease prevalence of poultry which affect the socio-economic conditions of corresponding district.

Uddin et al., (2010) determined the prevalence of diseases in various age groups and different season in different poultry farms of some selected areas at Narsingdi district of Bangladesh. A total 1263 dead and sick birds were examined. Among the diseases Infectious Bursal Disease (IBD) was found in 24.96% followed by Chronic Respiratory Disease (CRD)/ Mycoplasmosis in 9.87%), Newcastle Disease (ND) in 8.92%, Aspergillosis in 7.98%, Salmonellosis in 7.68%, Coccidiosis in 7.32%, Colibacillosis in5.70%, Ascites in 5.45%, Omphalitis in 2.64%, deficiency disorders/Stress in 1.34%, Necrotic Enteritis in 0.40%, Infectious Coryza in 0.32%, Fowl Cholera in 0.24%, and Infectious Bronchitis in 0.24%. In general, the highest number of cases we rerecorded in the age group of 8-20 days (42.64%), followed by 21-35 days age group (35.76%), 0-7 days age group(16.12%), 36-60 days age group (1.52%) and >60 days age group (3.96%) of poultry.

**2.4Socio-economic status of the Farmers**

Islam et al (2010) found in their investigation that here are no huge contrast in factors old enough, training, experience, relative, landholdings and normal clumps each year among the ranchers in three gatherings. Consequently, all example ranchers might actually have the equivalent financial foundation. In any case, a few specialists show impressive variety of financial condition in various level

**2.4.1 Educational level**

Rahman et al. (2002) found that, in case of educational level, about 47.3% of the farmers were in above secondary, 36% were in secondary, 12.2% were in primary and rest of the (4.5%) farmers had no educational qualification. It was revealed that 71.43% of the farmer had high level of knowledge about broiler farming (Table-1).

**Table -1 Educational status of farmers (Adapted from Rahman et al., 2002)**

|  |  |  |
| --- | --- | --- |
| **Level** | **Categories** | **Percent of total farmers** |
| Educational level | No education | 4.5 |
| Primary | 12.2 |
| Secondary | 36 |
| Above secondary | 47.3 |
| Level of Knowledge about farming | High | 71.43 |
| Medium | 24.29 |
| Poor | 4.28 |

School-going young men and young ladies of oven ranchers were expanded by 52.54 % and 54.43 % separately after associated with cultivating (Ahmed et al.,2009). Islam et al. (2010) in their investigation showed that all example ranchers might have the equivalent financial foundation as far as instructive level.

**2.4.2Occupational status**

Ahmed et al. (2009) detailed that in their examination plainly the fundamental occupation (from which the respondents procure enormous piece of their pay) of 34% respondents was cultivating and the leftover 66% respondents associated with cultivating as their auxiliary occupation. Among these 66% respondents, 4% associated with fisheries, 6% were business, 8% were administration holders, and 2% engaged with others occupation as their important occupation.

**2.4.3Monthly household income**

Ahmed et al. 2009 showed that the general month to month pay (determined by deducting cost caused for broiler farming from the all-out return) of the owners expanded from Tk. 6394.00 to Tk 12494.66 because of broiler farming is a profitable farm business. Sumy et al. (2016) tracked down, the yearly pay of most extreme farm proprietors had above Tk.40,000 and least farmers had pay of up to Tk 10000. Banerjee (2004) sees that in contrast with other domesticated animals Poultry requires fewer ventures to begin the farming. People from low pay gathering may likewise begin the business on a limited scale. Islam and Sasaki (2009) showed per capita pay increment with the expansion of farm size. Islam et al. (2010) discovered, the ranchers raised oven going from 1000-5000 are care comparable pay which might be named as First Income Goal Group (FIGG) and ranchers raised in excess of 5000 broilers accomplish most elevated pay that might be named as Second Income Goal Group (SIGG).

**2.4.4 Livelihood Impact**

In spite of just being a minor pay increment from poultry, this pay by the by has s constructive outcome on the occupation effect of the recipients as far as further developing the family diet, further developing the lodging states of the family, family resources and instructive consumptions of the youngsters. Discoveries from the overview show that a portion of the more unfortunate recipients who in any case figured out how to fit the bill for project support did in a few occurrences graduate out of destitution after which they diminish interest in poultry farming. However, it is indistinct the degree to which the underlying poultry exercises, or the credit access worked with this positive result. By the by as poultry ought to be seen as an initial step out of destitution (Todd, 1997), and not an objective in itself, get the focusing on directly all along (Jensen and Dolberg, 2002), just as try not to see drop-out rates as a sole standard for progress or disappointments.

It has been seen that goat and poultry rising are exceptionally powerful means for destitution mitigation in Bangladesh. It has additionally been seen that with 7-8 goats and 15-20 poultry given to a destitution-stricken homestead family, under conventional taking care of frameworks could easily reduce neediness. Ladies and youngsters additionally assume a significant part in bringing domesticated animals and poultry up in Bangladesh (Paul and Saadullah, 1991)

**2.5Farming System and Management Practices of Poultry Farm**

**2.5.1Poultry farming systems in Bangladesh**

The current cultivating frameworks of poultry in Bangladesh can be comprehensively isolated into two classes: conventional country terrace or searching/semi-rummaging framework and business cultivating framework Traditional poultry creation is a fundamental piece of rustic ranch family exercises; a couple of birds are raised with practically zero feed supplement to deliver eggs and meat for home utilization and any excess is sold. Business poultry ranches are characterized as those that raise birds in bound conditions dependent on high yielding varieties, business feeds and the board rehearse. Anyway the Department of Livestock Services (DLS) and a non-legislative association (NGO), Bangladesh Rural Advancement Committee (BRAC) have advanced a limited scale semi-rummaging business poultry model utilizing nearby or crossbreeds and fractional supplementation with concentrate takes care of (Salequs, 2000, Islam and Jabbar, 2005).

Broiler and Sonali farming is quickly expanding interest for creature items and growing business sector opportunity in the mid1990s, a business grill and layer area has arisen in Bangladesh. The area is described by escalated creation methods (intriguing and crossbred birds, concentrate feeds and medications) and specialized and strategy support (financed credit, nearby creation and import of day-old chicks, drugs and so on). The customary poultry area, where helpless smallholder makers rule, stays the significant provider of poultry meat and eggs in the provincial regions. In any case, the rustic poor have been not able to catch any critical portion of the quickly growing metropolitan market (Islam and Jabbar, 2005).

Most business poultry ranches in Bangladesh are limited scale (under 5000 birds for each group) In 1995, enormous and limited scope business poultry rears individually represented 12 and 2% of all out-poultry meat creation in the country with the searching framework representing the rest (Alam, 1995). The recently settled business poultry ranches were minuscule in the mid-1990s. Most homesteads actually back somewhere in the range of 1000 and 2500 birds yet the normal size of farm have been expanding gradually over the long run. A new report showed economies of scale in poultry cultivating. Some portion of which emerged from stowed away sponsorships, for example, modest credit and information sources which for the most part are not open to smallholder helpless ranchers. Rapid industrialization of poultry creation could wrongly hurt the system of pay age for the poor in the country (Jabbar et al 2005).

**2.5.2 Management systems in intensive poultry production**

Serious poultry creation depends on exceptional poultry breeds. In serious administration framework, makers target utilizing suggested practices like type of decision, fitting lodging. Taking care of, wellbeing and infectious prevention (Katalyi, 1998). The frameworks engaged with concentrated poultry creation incorporate, scheduled floor, profound litter and battery confine frameworks.

**(a) Slated floor system**

Here birds are loaded at a pace of 0.09 square meter per bird and little work is required (Sainsbury, 1993).

**(b) Deep litter system**

Most ranchers have taken on the profound litter framework; but its viability is frustrated by helpless house development and spillage of water. Espresso husks, saw residue and wood shavings are utilized a litter. The accomplishment of profound litter framework is subject to decay of litter by microscopic organisms (Sainabury, 1993). Litter keeps ties spotless and agreeable and ingests dampness from droppings (Ensimiger, 1992).

This is the most effective on the grounds that egg creation and feed change proficiency are high. The weaknesses of this framework are, it is exorbitant to butt-centric many eggs get breaks and poultry are exceptionally inclined to vermins and bugs. The poultry house unit is developed and fitted with battery confines that might be common or individual, feces gather on waste plate under the battery confines that are cleaned physically (Portsmouth, 1989).

**(c) Battery cage system**

This is the most effective on the grounds that egg creation and feed change effectiveness are high. The inconveniences of this framework are it is exorbitant to butt-centric many eggs get breaks and poultry are exceptionally inclined to vermin and bugs. The poultry house unit is developed and fitted with battery confines that might be mutual or individual, feces gather on waste plate under the battery confines that are cleaned physically (Portsmouth, 1989).

**2.5.3 Poultry environment and housing**

1. **Ventilation and humidity**

The primary goal of proficient ventilation is to guarantee a sufficient stock of outside air to the birds, eliminate undesirable gases and abundance dampness Poultry houses might be ventilated normally or precisely (Portsmouth, 1989). Normal ventilation is generally utilized in Africa and relies upon the distinction in temperature between air inside the poultry house and that outside. On the off chance that the air outside is cooler than that inside, warm air inside the house is overwhelm and is supplanted by cooler air. The open side dividers go about as bays edge ventilators or openings on the end dividers close to edges go about as outlets Air speed is of significance in regular ventilation since it influences the pace of progress of air. Nonstop edge ventilators are attractive for long structures however for little structures two power source ventilators close to the rooftop on each side of the divider are sufficient (Kekcocha, 1984).

North and Bell (1990) recommended to give 1.75 ft of wind stream each minute per pound of live bird in the house or to give 0.11 m²' of wind current each moment per kilo of live birds in the house. Relative stickiness of 60-80% is wanted in the house for ideal creation (Partisan, 1993). Ensminger (1992) suggests relative stickiness of 60-70% for layer houses as high dampness lessens vanishing and expands endurance of microbes

**(b) Lighting**

Egg creation is invigorated by expansion in day length. Decrease in day length prompts suspension of egg creation and birds shed. Under regular light conditions, day length shifts with the season and scope. At equinox (21 March and 23 September), the days and evenings are equivalent long. At the equator, day length is barely 12 hours. Open sided houses are a standard in the jungles and along these lines enhancing light in typical. In damp regions, where there is little change in day length consistently, 2-3 hours of sufficient lighting is suggested for laying birds (Smith, 1993). On the off chance that light power is unevenly circulated in the house, with brilliant and dim regions, coves and to move in regions with light and this will in general reason improvement of indecencies and respiratory sicknesses (Sainsbury, 1993). Longer days invigorate egg creation and urge hens to devour more feed. In ovens, a lot of light might expand their exercises and accordingly lessen the effectiveness of feed use (Smith, 1993)

**(c) Temperature**

Sufficient lodging should give the herd ideal air quality and warm conditions with the goal that presentation might be upgraded. Poultry house protection is an imperative for open sided and earth controlled houses Most protection is restricted to the rooftop where most prominent warmth is lost during chilly climate conditions and furthermore where sun beams strike (North and Bell, 1990).

Agonizing temperature is 35-37.7 degrees Celsius in the primary seven day stretch of life. This is diminished by 3 degrees every week as birds develop Huddling of chicks together around the warmth source shows that the temperature is too low Chicks are generally fanned out in case temperature is too high however those that are satisfied are uniformly spread over the agonizing region (Portsmouth, 1989). Grown-up hen produce eggs maximally with ideal temperature near 24degroes (Austic et al., 1990) yet in seriously oversaw birds, ideal temperature ought to be 21degrees (Partisan, 1993) Oba (2000) suggests a temperature 75 for ovens. Expansion in encompassing temperature lessens craving, water admission builds, egg weight and egg usefulness decreases. It likewise brings about laying meager shelled eggs (Kekeocha., 1984, Smith, 1993). Temperature beneath the ideal level pushes down hatchability, feed change productivity and egg weight (North and Bell, 1990).

**(d) Chicken spacing**

Chicken separating is of significance in the poultry house to try not to stuff since this works with sickness transmission. Loading relies upon the sort of chicken, the board framework, age and size of chicken. The floor space necessity of ovens is 0.3 sq feet from 0 a month old enough and 0.75 sq feet from 4 two months old enough while layers need 0.3 sq feet of room from 0 a month, 0.6 sq feet from 4 two months, 1.25 sq feet from 9 four months and 1.5 sq feet for over 16weeks old enough (Ensminger, 1992).

In the brooder, 7 meters of drift space is permitted per 1000 chicks and feeder space of 2.5cm per chick in the initial a month, 5cm per chick in the subsequent month and 7 cm in the third month. Water space of 2.5 cm is permitted per chick in the initial fourteen days of their life and 5cm in the excess time frame (Kekeocha, 1984).

**(e) Feeding and nutrition**

Commonwealth food sources are alluded to as complete feed since they contain proteins, blow out, nutrients, minerals and different supplements important for legitimate development, egg creation and soundness of herds. Carbohydrates and files are essential wellsprings of energy expected to keep up with internal heat level, development of the body and for substance responses engaged with union of body tines and end of squanders (Austicet al.,1990).

The customary staples utilized in feed detailing are maize, sorghum, fish meal, soybean feast as wellsprings of starches and proteins separately. Different fixings added incorporate, mineral salts, nutrients, coccidiostats and cell reinforcements like ethoxyquine or butylated hydroxytoluene, nutrient and mineral premises (Smith, 1993).

**Table -2Feeder space requirement per bird.**

|  |  |
| --- | --- |
| **Age weeks** | **Feeder space per bird (Lineal cm.) Minimum** |
| 0 to 2 | 2.5 |
| 3 to 6 | 4.0 |
| 7 to 12 | 7.5 |
| 13 and above | 10.0 |

**Source: Banerjee, 1998.**

**(f) Water consumption**

Water is regularly given adlibitum. Water utilization increments with expansion in age of the bird, protein and sodium chloride levels in the feed Water hardship can prompt passing of poultry inside 24 hours. A 10% limitation of water accessibility can lessen the development rate and feed change productivity of grills. In layers, water hardship can prompt shedding and suspension of egg creation (Smith, 1993).

**Table-3Amount of water required and watering space for chicken**

|  |  |  |
| --- | --- | --- |
| **Age (weeks)** | **Water space per chick in linear cm** | **Amount of water per 100 birds (liters)** |
| 0 to 4 | 0.6 | 2.8-4 |
| 5 to 8 | 1.2 | 12-14 |
| 9 to 12 | 10 | 20-25 |
| 13 to 16 | 12.5 | 35-40 |
| 16 and above | 15 | 45-48 |

**Source: Banerjee, 1998.**

**(g) Litter management**

Water is regularly given adlibitum. Water utilization increments with expansion in age of the bird, protein and sodium chloride levels in the feed Water hardship can prompt passing of poultry inside 24 hours. A 10% limitation of water accessibility can lessen the development rate and feed change productivity of grills. In layers, water hardship can prompt shedding and suspension of egg creation (Smith, 1993).

Consumer focuses and drinking regions are risky because of water sprinkling and grouping of birds. Accordingly it is fundamental to often turn this litter. Wet litter is cold and will in general take up heat trying to evaporate. It's fitting to begin with about 70mm layer of litter and add to it with time Adding litter weakens droppings and the state of litter is improved. High alkali levels are perilous and terrible to administrators. Alkali levels ought not to surpass 15-20 p.p.m., levels more than 40 p.p.m may decrease feed admission. Levels more than 50 p m influence the mucous layers wing the respiratory lot, influence breath and may likewise cause visual impairment (Sainsbury, 1993).

**2.5.4Waste Handling**

Squanders are delivered in a wide range of poultry tasks. After poultry houses are cleaned and disinfected, the squanders ought to be bound in one region for later evacuation by particular organizations for fertilizing the soil or legitimate removal to try not to pollute the climate. This repression region can be utilized for a wide range of squanders including litter from most poultry ranches and un-brought forth eggs from incubation facilities.

A review was completed by Sarker et al. (2009) in the 10 little, 6 medium and 4 huge ranches of Kishoregonj. Mymensingh and Gazipur regions to distinguish the poultry squander materials and how to know their removal technique in Bangladesh. They distinguished the poisons in the poultry ranch incorporate litters, composts, scents, commotion, quills, residue and synthetics wastewater, bugs, dead birds, incubation facility trash and residue from feed fabricating plants. Litter is by and large a combination of excrement, bedding materials, squandered feed, plumes and some piece of soil. Among the little homestead proprietors 20% ranchers couldn't utilize their poultry litter for a specific work, 40% of them sold their poultry litter on the lookout, 30% of them utilized their poultry litter for crop creation and, 10% of them utilized their poultry litter for fish culture About half of the medium ranch.

**2.5.5Record keeping**

The way to great business and the board is records. Records are kept to give data from which the poultry business may broke down so the administrator might foster more successful designs to foster the venture, to give benefit and deficit accounts, to give total assets explanation showing monetary advancement consistently, to keep creation records on birds and to save a total authentic record of monetary exchanges for future reference (Ensminger, 1992). Issues recorded by most ranchers incorporate; all out number of housed, the expense of birds or the expense of raising birds in case it's finished by the proprietor, eggs gathered every day, deals made, feed utilization, mortality and work costs (Sainabury, 1993). Records ought not to be explained else they may not be kept as expected by laborers (Smith, 1993).

**2.5.6 Farm profitability-oriented research works**

The total cost of meat production per bird, returns per bird over the variable costs has been found highest on small broiler farms, followed by medium and large farms. The study has observed that broiler farming is a profitable venture and has a bright future in the Tamil Nadu agro based industry for improving economic status of the farming community in general and in the study are in particular. Study reveals that the total variable cost per bird was the highest on small farms (Rs 101.23), followed by medium (Rs.98.27) and large (Rs.96.28) farms, with the overall average of Rs 98.56. The total cost of production per bird was Rs.113.93, Rs.111.36 and Rs. 108.99, on the overall average Rs.111.42. Also reported the accounted gross return was Rs.222119.16, Rs.332322.34 and Rs.664766.48 in small, medium and large size farms, on overall average Rs.398994.62 reported by V. Balamurugan and M. Manoharan-2014.

Another socio-economic study conducted by Santosh kumar et al. 2018 detailed analysis of the economics of commercial broiler chicken production, the total production cost on non-contract and contract farms were Rs.71.01 and Rs.5.34 respectively. The share of fixed cost in total cost was 3.82 and 53.13 per cent while variable cost was 96.18 and 46.87 per cent in non-contract and contract farms respectively. The gross returns per kilogram of live weight was Rs.78.59 and 6.85 in non-contract and contract farming respectively. Net returns over variable cost and net returns over total cost were found to be Rs.10.78 and Rs.8.09 in non-contract farms whereas in contract farms it was Rs.4.35 and Rs.1.51, respectively. Benefit-cost ratio was analyzed and found to be 1.11 and 1.28 in non-contract and contract farming system.

A study regarding commercial broiler farming cost and benefits conducted by Al-Mamunetal*.*had estimated the average cost of raising broiler to be Tk. 8, 35,910.65 per farm per year. It was found that the variable cost per farm per year stood at Tk. 8, 23,735.93 which accounted for 98.54 percent of total cost. The total fixed cost per farm per year accounted to Tk. 14,041.66. It is evident from the study that the gross return per farm per year stood at Tk. 10, 78,022.39. The net return per farm per year was calculated at Tk.2, 42,111.47 for large scale commercial broiler farm.

Islam et al,. (2021) Season- and farm-wise productivity and mortality of Sonali chickens in 53 selected poultry farms from nine Upozillas of Rajshahi District during December 2018 and November 2019were assessed. Results revealed that, on average, small farms produced 775, medium farms1828 and large farms 3442 marketable live birds. Mortality was recorded in the following order: small farms > medium farms > large farms. Highest number of birds was produced in spring followed by winter, summer and rainy season, whereas the highest mortality was recorded in winter followed by rainy, summer and spring. Birds reared in smaller farms consumed greater amount of feed compared to those reared in larger farms. Consequently, the live weights, edible weights and edible ratios of the chickens differed significantly due to the farm size. Season-wise variations were significant for day-old chick price, gross return per bird and benefit-cost ratio. Farm-wise variations in the profitability components demonstrated that all the components of the large farms were significantly higher than those of the medium and small farms. With regard to the commercial poultry enterprise ofthe country, therefore, the present findings on sonali chicken farming in Rajshahi District are quite encouraging from productivity, profitability and sustainability points of views

Farm-wise variations in the profitability components demonstrated that there exist highly significant differences for each component for sonali chickens reared and marketed in Rajshahi. The Gross Cost per flock, Gross Return per flock and Net Profit per flock for small farms were Tk. 46000±4183, Tk. 49420±634 and Tk. 3420±275, respectively. For medium farms, the values were Tk. 132667±14827, Tk. 145729±2052 and 13059±1129, respectively. For large farms, however, all the components had higher values of Tk.357857±51266, Tk. 397976±17324 and 40119±3209, respectively, suggesting that the overall GC (F= 40.693; P < 0.001), GR (F= 44.114; P < 0.001) and NP (F= 10.420; P <0.01) of the large farms were significantly higher than those of the medium and small farms in the study area.

Lastly, Broiler farming rearing more profitable than Sonali faming

CHAPTER-III

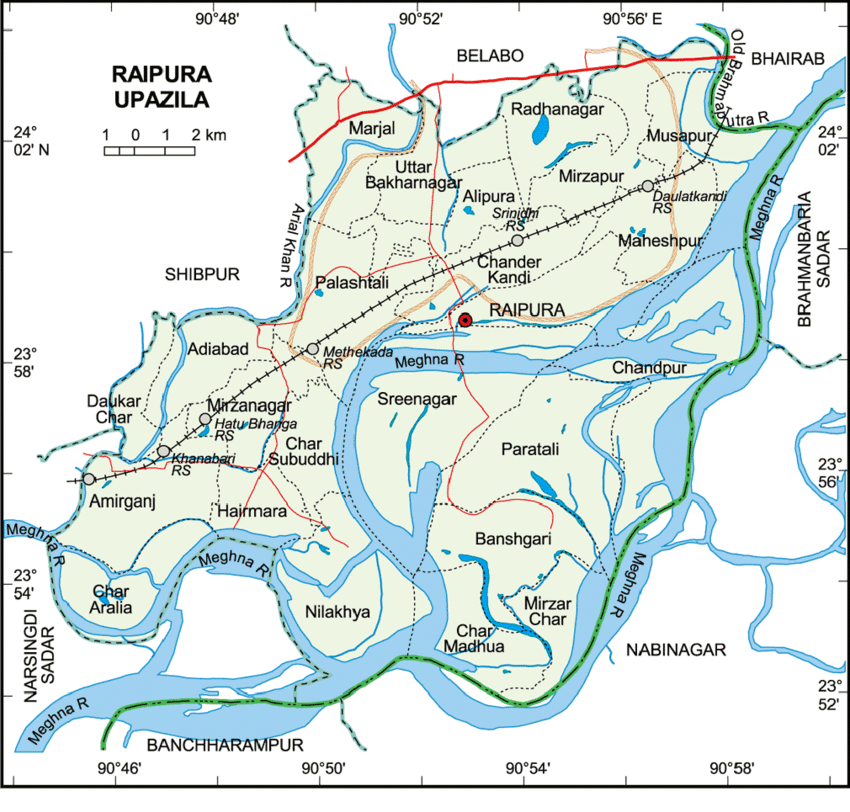
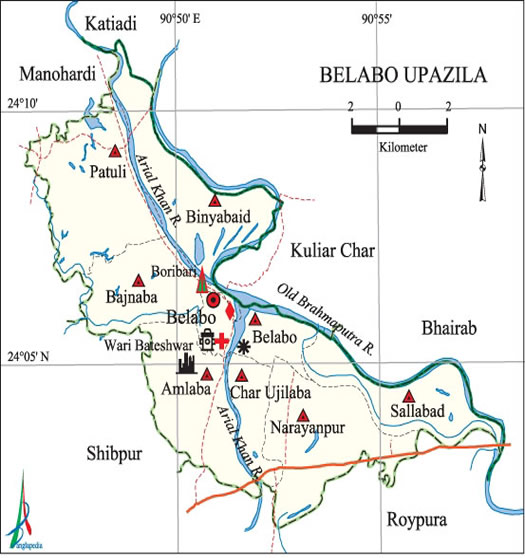
**METHODOLOGY OF THE STUDY**

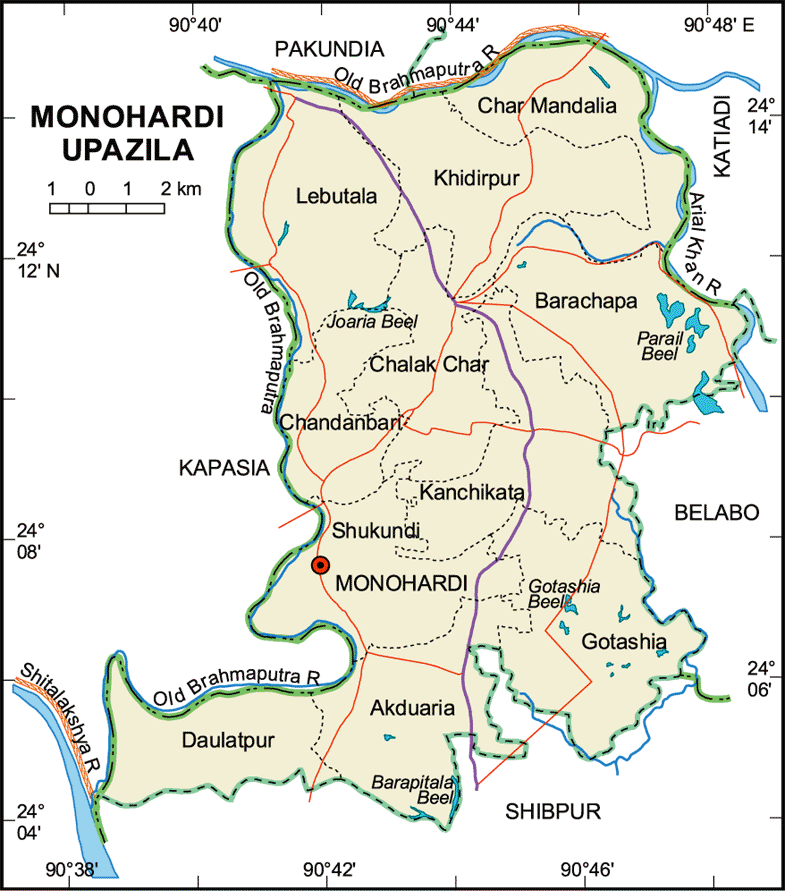
**CHAPTER-III**

# METHODOLOGY OF THE STUDY

## 3.1 Study area

The study was conducted in Belabo, Raipura, Monohordi and Shibpur Upazilato investigate the comparative profitability of broiler and sonali chicken under Narsingdi District during the period in the year 2022.



****

**Figure- 1: Location of the study area**

In Belabo, Raipura, Monohordi and Shibpur Upazillas, a large portion of the homesteads are arranged close to the house. For improved faming framework, transport offices and different offices are considered during site determination for farming.

## 3.2Study Period

## The investigation was completed in Belabo, Raipura, Monohordi and Shibpur Upazila during period from 15 January to 15 June 2022. During this period, 40 farms were chosen for study &data were collected by utilizing a meeting plan through eye-to-eye meeting and collection of necessary data.

## 3.3 Sample size

## In total 40 farms. Out of that poultry farms 20 numbers of farms ware selected as broiler farms and 20 numbers of farms ware selected as Sonali chicken farms. In each Upazila 5 Broiler and 5 Sonali farms came under detailed study.

## 3.4 Sampling Methods

## 40 poultry farmers from Belabo, Raipura, Monohordi and shibpur Upazila sunder Narsingdi district were chosen arbitrarily (Stratified arbitrary examining). Each farm raising somewhere around min. 1000 bird is thought about.

## 3.5 Methods of Data Collection

Information was gathered through direct meeting plan and recorded in a poll. The timetable was arranged keeping up with significance with the destinations of the examination. Prior to dispatching the overview, the survey was pre-tried and improved appropriately. To gather more sanitized information of different homesteads a coordinated poll was designed.

****

**Figure-2: Data collection (DOC cost, Feed cost, live weight, selling price etc.) from poultry farmer.**

## 3.6 Data Analytical Techniques and Report Writing

The collected data were analyzed after coding, decoding, summarized. Descriptive statistics were used to analyze the data.

CHAPTER-IV

**RESULTS AND DISCUSSIONS**

**CHAPTER-IV**

**RESULTS AND DISCUSSIONS**

In this chapter highlighted the probable outcomes with necessary discussions of the investigation under the study. The major areas of discussion on Socioeconomic characteristics and general information of the poultry, production performances of the farm, farm profitability and constraints of farming with few recommendations to make poultry industry as a sustainable agribusiness enterprise in the study areas under Narsingdi District.

**4.1 General and Socioeconomic Characteristics of Broiler and Sonali farm owners**

Poultry farming is a great opportunity for the rural people and youth as a means of income generation. Comparatively rich farmers were involved in farming nowadays. There were variations in source of investment, training, farming as an occupation for the farmers, amount of loan taken, level of educational knowledge, sources of drinking water, latrine condition and health status of the farmers, but no variation were observed in farm size and management skills of the farmers. Around 33% of the ranchers were educated, the other were unskilled. The greater part was not occupied with other type of occupation and by this occupation their monetary condition was sufficiently sound to keep up with their family.

**4.1.1Socio-economic Profiles of Poultry Farm Owners**

In this section briefly discussed the current status of poultry farming practices of two categories of poultry enterprises like as Broiler and Sonali chicken farming practices on socioeconomic characteristics farm owners and status of their farms in this part From the results indicated in Table-4 it was found that, most of the farm owners lay under 30 age group and stood at 47.5 percent of both type of farmers. Small and marginal farmers were engaged in poultry farming practices.

Most of the poultry farmers lay under primary to secondary education found about 45percent of the total farm owners and illiterate was minimum numbers about 7.5 percent. In case of sources of income about 45 percent farm owners earned their yearly income from Poultry farming and cropping, 20 percent poultry farming with small business and 20 percent only poultry farming, and 42 percent farm owners earned annual income under Tk.5,00,000.00 to Tk.10,00,000.00 and 20 percent lies under Tk. 500,000.00. On the other hand, 50 percent treat poultry farming as a tertiary occupation

**Table-4 Socioeconomic Profiles of broiler and sonali farm owners.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Number of Poultry Farms** | | | | | |
| **Particulars of Variables** | **Broiler**  **N =20** | **Sonali Chicken**  **N=20** | | **All average**  **(N=40)** | | |
| **Age of Farm Owner:** |  |  | |  | | |
| Below 30 Years  30- 45 Years  Above 45 Years | 9 (45.0)  7 (35.0)  4 (20.0) | 10(50.0)  8 (40.0)  2 (10.0 % | | 19 (47.5)  15 (37.5)  6 (15.0) | | |
| **Land Holding size of the Farm owners:** | |  | |  | | |
| Landless (0.00-0.50 Acre)  Marginal (0.51-1.24 Acre)  Small (1.25-2.47 Acre)  Medium (2.48-4.94 Acre)  Large (4.95 Acre) | 7 (35.0)  5 (25.0)  3 (15.0)  4 (20.0)  1 (5.0) | 4 (20.0)  9 (45.0)  3 (15.0)  3 (15.0)  2 (10.0) | | 11 (37.5)  14 (25.0)  6 (15.0)  7 (20.0)  3 (5.0) | | |
| **Educational status:** |  |  | |  | | |
| Illiterate  Primary level Secondary level  Higher Secondary level  Graduate and above | 1 (5.0)  8 (40.0)  7 (35.0)  4 (20.0) | 2 (10.0)  10 (50.0)  5 (25.0)  3 (15.0) | | 3 (7.5)  18 (45.0)  12 (30.0)  7 (17.5) | | |
| **Sources of income of Farm Owner:** | |  | |  | |
| Poultry Farming only  P. farming and cropping  P. farming and small business  Poultry farming and services | 4 (20.0)  10 (50.0)  3 (15.0)  3 (15.0) | 4(20.0)  8(40.0)  5 (25.0)  3 (15.0) | | 8 (20.0)  18 (45.0)  8 (20.0)  6 (15.0) | | |
| **Income level of the Farm Owner:** |  |  | |  | | |
| Below Tk. 500,000  Tk. 500,000-Tk.10,00,000  Above Tk.10,00,000 | | | 5(25.0)  7 (35.0)  8 (40.0) | 3(15.0)  10 (40.0)  7 (35.0) | | 8 (20.0)  17 (42.5)  15 (37.5) | |
| **Occupational Status:** |  |  | |  | | |
| Primary and main occupation  Secondary occupation  Tertiary occupation | | 2 (10.0)  5 (25.0)  13 (65.0) | | 1 (5.0)  12(60.0)  7 (35.0) | 3 (7.5)  17 (42.5)  20 (50.0) |

**Source: Field survey, 2022 (Figures in the Parenthesis indicates Percentage of farm owners)**

The general farm operational financing data analyzed and found that, year of establishing poultry farming as anagri-farm business resulted about 47.5 percent farm owners had established this farming practices as a profession within 5-10 years duration followed by below 5 years it stood at about 37.5 percent and 15 percent farmers above 10 years’ time.

**Table-5 General profiles of broiler and sonali farm operation and financing system.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Particulars of Variables** | **Number of Poultry Farms** | | |
|  | **Broiler**  **N =15** | **Sonali Chicken**  **N=15** | **All average**  **(N=40)** |
| **Year of Poultry farm business:** |  |  |  |
| Below 5 Years  5 - 10 Years  Above 10 Years | 3(15.0)  12(60.0)  5 (25.0) | 12(60.0)  7(35.0)  1 (5.0) | 15 (37.5)  19 (47.5)  6 (15.0) |
| **Ownership pattern of Farm:** |  |  |  |
| Owned  Rented in  Shared in | 13(65.0)  4(20.0)  3(15.0) | 15(75.0)  3(15.0)  2 (10.0) | 28 (70.0)  7 (17.5)  5 (7.5) |
| **Nature of Financing for operation:** |  |  |  |
| Fully Own Financed  Both own and Bank Financed  Fully Bank Financed  Borrowed from Relatives etc. | 9 (45.0)  5(25.0)  4 (20.0)  2 (10.0) | 10(50.0)  6(30.0)  2 (10.0)  2 (10.0) | 19 (52.5)  11 (27.5)  6 (15.0)  4 (10.0) |

**Source: Field Survey, 2022 (Figures in the Parenthesis indicates Percentage of farms)**

In case of ownership patterns of farming most of the farm owners about 70 percent farm owners operated by own self and shared in nature about 7.5 percent farmers. On the other hand about 52.5 percent farm owner operated their farm by own financing followed by 32.5 percent financed from bank and own sources for financing of the farm practices (Table-5).

**4.1.2 Family composition and availability of family labour for broiler and sonali farms**

Total number of farm family members of broiler and sonali farm owners were recorded and found 79 and 91 respectively showed in Table-5. The number of farm families in Sonali farm was found higher than Broiler farm owners. In case of adult and children members in both farm families the male family members were found higher than female member reported by the farm owners in table-5.

**Table-6 Family composition of broiler and Sonali farm owners.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Particulars** | **Family Composition** | | |
| **Broiler**  **(N=20)** | **Sonali**  **(N=20)** | **All Average**  **(N=40)** |
| **Adult family members:** | | | |
| Male | 25 (31.65) | 29 (31.87) | 54 (31.76) |
| Female | 22 (27.85) | 27 (29.67) | 49 (28.82) |
| Children: | | | |
| Male | 17 (21.52) | 19 (20.88) | 36 (21.18) |
| Female | 15 (18.99) | 16 (17.58) | 31 (18.24) |
| ALL | 79 (100.00) | 91 (100.00) | 170(100.00) |

**Source: Field survey, 2022.** (Parentheses indicates respective percentage)

The male and female family members were found in total about 53.0 percent and 47.0 percent.

**4.1.3 Health and Livelihood Status of the Farm family members**

Health status of the farm family members is an important matter to make sustainable the farm business as he or she is a good health person and can give more efforts than sick one.

**Table-7 Health and Livelihood Status of the Farm owners.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Particulars of Variables** | **Number of Poultry Farms** | | |
| **Broiler**  **N =20** | **Sonali Chicken**  **N=20** | **All farms**  **(N=40)** |
| **A. Health status of the Farmers:** | | | |
| **Good** | 12 (60.0) | 11 (55.0) | 33(52.5) |
| Moderate | 6(30.0) | 7 (35.0) | 13 (32.5) |
| Poor | 2 (10.0) | 2 (10.0) | 4 (10.0) |
| **B. Sources of Drinking water of the Farmers:** | | | |
| Owned Tube-Well | 15 (75.0) | 12 (60.0) | 27(67.5) |
| Shared Tube-Well | 3 (15.0) | 3 (15.0) | 6 (15.0) |
| Deep Tube -Well | 2 (10.0) | 5 (25.0) | 7 (17.5) |
| **C. Sanitary Facilities:** | | | |
| Non-sanitary (open place) | 2 (10.0) | 3 (15.0) | 5(12.5) |
| Semi-sanitary (Katcha) | 10 (50.0) | 12 (60.0) | 22(55.0) |
| Sanitary (Pucca) | 8 (40.0) | 5 (25.0) | 13 (32.5) |

**Source: Field Survey, 2022**

The status of the farm family members were recorded and stated in Table-7. It revealed that about 52.5 percent of farm owners were found under in good health, 32.5 percent was found moderate and about 10.0 percent of farm owners were in poor health status person. On the other hand, the sources of drinking water of the most of the farm owners and farm family members were supplied from own deep tube well then 17.5 percent from deep tube well and 15 percent maintained from shared tube well reported in Table-16. In case of sanitary facilities found that about 55.0 percent used in Semi-sanitary (Katcha) latrin and 32.5 percent farm owners used sanitary (Pucca) latrin in the farms and their family stead.

**4.2 General Farm Information and Overall Farm Supervision and Management System**

**4.2.1Strains of broiler birds**

The broiler is common sorts of broadly contrasting aggregates. The purported Hubbard Classic, Starbro, Cobb-500, Arber Acere, Ross, Lohmanh, ISa-I 757 are normal. In addition, the common cross-bred are used as sonali chicken.

## 4.2.2 Flock Sizes of the farms

In total 40 number of farms were selected for detailed study where 20 farm was commercial Broiler and 20 was commercial Sonali chicken poultry enterprises from 4 Upazila under Narsingdi District. Most of the farm flock size lies in 1500 -2500 birds included 1000-3000 birds inside the general size between 1000-2500 birds of the studied farms.

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**Figure-3: Flock Sizes**

## Individual farms wise flock sizes for Broiler and Sonali chicken farms were recorded and number of birds are as follows:

## Table-8 Distribution of individual farm flock size by location of the broiler farms.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Farm Location** | **Farm ID** | **Name of the Farm** | **Individual farm flock size** | | **Average flock size** |
| **Location -1 (Belabo)** | Farm-1 | Arif poultry farm | | 1500 | **1240** |
| Farm-2 | Khondokar poultry farm | | 1500 |
| Farm-3 | Sabbir poultry farm | | 1200 |
| Farm-4 | Adorsho poultry farm | | 1000 |
| Farm-5 | Mostak poultry farm | | 1000 |
| **Location -2 (Monohordi)** | Farm-6 | Azizar poultry farm | | 1500 | **1400** |
| Farm-7 | Johir poultry farm | | 1500 |
| Farm-8 | Siddik poultry farm | | 1000 |
| Farm-9 | Josna poultry farm | | 1500 |
| Farm-10 | Raju poultry farm | | 1500 |
| **Location-3 (Raipura)** | Farm-11 | Kafi poultry farm | | 1300 | **1460** |
| Farm-12 | Rashed poultry farm | | 1100 |
| Farm-13 | Taleb poultry farm | | 1900 |
| Farm-14 | Bari poultry farm | | 1800 |
| Farm-15 | Momotaz poultry farm | | 1200 |
| **Location -4**  **(Shibpur)** | Farm-16 | Sarnali Poultry farm | | 1000 | **2540** |
| Farm-17 | Ali poultry farm | | 2500 |
| Farm-18 | Moin poultry farm | | 3500 |
| Farm-19 | Khondokar Poultry farm | | 3000 |
| Farm-20 | Siddik Poultry Farm | | 2700 |

**Source: Field Survey, 2022**

The above data showed that, the farm sizes varied 1000 to 3500 birds which are treated as small scale poultry farmers. Most of the broiler farms in the study areas were found like such individual farm population size. Maximum number of farm owners reared 3500 birds per batch it stood at about 5.0 percent and most of the flock size lies between 1000-1500 birds about 70.0 percent which is treated by the farmer as manageable size and about 25.0 percent farm owners 2000 birds in their farms. Practically it was found that, the individual and average flock size comparatively higher Shibpur Upazila for suitable location as in near Narsingdi and Dhaka city as well as well communication facilities. Simultaneously, here 20 sonali chicken farms were also investigated for studied and recorded the individual farm bird’s population in a particular batch mentioned as follows:

## Table-9 Distribution of individual farm flock size by location of the sonali

## Chicken farms.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Farm Location** | **Farm ID** | **Name of the Farm** | **Individual farm flock size** | | **Average flock size** | | |
| **Location -1 (Belabo)** | Farm-1 | Jamil poultry farm | | 2000 | | **1600** |
| Farm-2 | Khan poultry farm | | 1500 | |
| Farm-3 | Sabur poultry farm | | 1500 | |
| Farm-4 | Arif poultry farm | | 2000 | |
| Farm-5 | Mostofa poultry farm | | 1000 | |
| **Location -2 (Monohordi)** | Farm-6 | Azizul poultry farm | | 1300 | | **1360** |
| Farm-7 | Johir poultry farm | | 1500 | |
| Farm-8 | Sabbir poultry farm | | 1000 | |
| Farm-9 | Josna poultry farm | | 1500 | |
| Farm-10 | Rajib poultry farm | | 1500 | |
| **Location-3 (Raipura)** | Farm-11 | Majid poultry farm | | 2000 | | **1760** |
| Farm-12 | Rashed poultry farm | | 1800 | |
| Farm-13 | Tonny poultry farm | | 2000 | |
| Farm-14 | Bari poultry farm | | 2000 | |
| Farm-15 | Aman poultry farm | | 1000 | |
| **Location-4**  **(Shibpur)** | Farm-16 | Saddam poultry farm | | 1500 | | **2060** |
| Farm-17 | Rangu poultry farm | | 2800 | |
| Farm-18 | Meem poultry farm | | 2500 | |
| Farm-19 | Toma poultry farm | | 2000 | |
| Farm-20 | Taj poultry farm | | 1500 | |

**Source: Field survey, 2022**

The above data showed that, the farm sizes varied 1000 to 2800 sonali birds which are treated as small scale poultry farmers. Most of the Sonali chicken farms in the study areas were found like such above individual farm population. Maximum number of farm owner highest bird reared 2800 birds per batch it stood only at about 5.0 percent of farms. Most of the flock size lies between 1000-1500 birds about 55.0 percent which is treated by the farmer as manageable Sonali Farm size and about 45.0 percent farm owners reared more than 1500 birds in their farms in a single batch. During field study it was found that, the individual and average flock size also comparatively higher at Shibpur Upazila than Raipur resettable location as in near to Narsingdi and Dhaka city as well as good communication system.

## 4.2.3 Farm Supervision and Management practices:

## In this section showed the overall farm supervision and production, housing, feeding and management practices of the studied poultry farms. Firstly, I explained here the supervisions and management practices of both type of farms in Table-10. As per farm owners reported data it was found that, about 50 percent to 60 percent farm owners operated his/her farms under own supervision. The highest number farm owners reared 1500 to 2000 number of birds flock size accounted on average its 55 percent.

## Table-10Farm supervision and management practices of broiler and sonali farms.

|  |  |  |  |
| --- | --- | --- | --- |
| **Particulars of Variables** | **Type of Poultry Farms** | | |
| **Broiler**  **(N =20)** | **Sonali Chicken**  **(N=20)** | **All Average**  **(N=40)** |
| **Types of people served in farms:**  Owner him/herself  Salaried Farm manager  Casual hired farm staffs  Responsible other family members | 10 (50.0)  3 (15.0)  5 (25.0)  2 (10.0) | 12 (60.0)  2 (10.0)  3 (15.0)  4 (10.0) | 22 (55.0)  5 (12.5)  8 (17.5.0)  6 (15.0) |
| **Flock size of the Farms:**  Less than 1500 birds  1500 to 2000 birds  Above 2000 birds | 8 (40.0)  8 (40.0)  4 (20.0) | 4 (20.0)  14 (70.0)  2 (10.0) | 12 (30.0)  22 (55.0)  6 (15.0) |
| **Decision made on purchase and selling of farm inputs and produced live birds:** | | | |
| Mostly farm owner him/ herself  Mainly decided by farm manager  Decided by adult family members  Decided by other vendors | 13(65.0)  1(5.0)  4(20.0)  2 (10.0) | 12 (60.0)  2 (10.0)  3 (15.0)  3 (15.0) | 25(62.5)  3 (7.5)  7(17.5)  5 (12.5) |
| **Veterinary Treatment and service provision:** | |  |  |
| Owner him/her self  Manager himself  Contractual Veterinary Doctors  DLS other staffs | 5 (25.0)  7 (35.0)  5 (25.0)  3 (15.0) | 10 (50.0)  4 (20.0)  3 (15.0)  3 (15.0) | 15 (37.5)  11 (27.5)  8 (20.0)  6 (15.0) |

**Sources: Field survey, 2022. (Figures in the parentheses indicates percentage of farm owners)**

## Most of the farm owners of both type of farming made own self decision on farm purchase and sells and it stood at about 62.5 percent. In case of treatment and veterinary care most of the farm owners gave treatment of their affected birds to their own self about 25 percent in Broiler and 50 percent in Sonali farming where DLS and contractual veterinary doctors were 15 percent and 20 percent respectively.

**4.2.4Farm Housing practices**

There are obviously a wide range of styles and plans of houses like shed sort, blend type, peak type and so on during this examination, the majority of the ranchers built peak type house for their bird which is made by bamboo and tin and suing the wire net around the houses, practically the entirety of the houses are south-bound and keep the house in very much ventilated.

**Table-11Housing practices of both broiler and sonali poultry farms.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Particulars of Variables** | **Type of Poultry Farms** | | | | |
| **Broiler**  **(N =20)** | **Sonali Chicken**  **(N=20)** | | **All average**  **(N=40)** | |
| **Nature of poultry farmhouse**  Shawn’s House  Semi Pucca Tin shed  Part of structured Building | 12 (60.0)  4 (20.0)  4 (20.0) | 14 (75.0)  4 (20.0)  2 (10.0) | | 26 (65.0)  8 (20.0)  6 (15.0) | |
| **Location of Poultry Shed**  Attached to Farm owner House  Near to Farm owner resident House  Far from owner House | 10 (50.0)  6 (30.0)  4 (20.0) | 12 (60.0)  4(20.0)  4 (20.0) | | 22 (55.0)  10 (25.0)  8 (20.0) | |
| **Per bird allotted Floor Space** |  |  | |  | |
| 1st week to 2ndweek (0.5 to 0.74 Sqft)  3rd week to 4thweek (0.75 Sqft to1.0 Sqft))  5thweek and above (above1.0 Sqft) | 16 (80.0)  18 (90.0)  16 (80.0) | 18 (90.0)  14 (80.0)  18 (90.0) | | 34 (85.0)  32 (80.0)  34 (85.0) | |
| **Per bird average Feeder Size** |  |  | |  | |
| 1st week to 2ndweek (0.50 inch)  3rd week to 4thweek (0.51 inch to 0.75 inch) 5th week and above (Above 0.75 inch) | 14 (70.0)  18 (90.0)  18 (90.0) | 16 (90.0)  14 (80.0)  18 (90.0) | | 30 (75.0)  32 (80.0)  36 (90.0) | |
| **Allotted Drinker per 50 birds** |  |  | |  | |
| 1st week to 2nd week (1-2 number)  3rd week to 4thweek (3-4 number)  5thweek and above (Above 5) | 18 (90.0)  18 (90.0)  8 (40.0) | 16 (80.0)  14 (80.0)  10 (50.0) | | 34 (85.0)  32 (80.0)  18 (45.0) | |
| **Ventilation facilities of the Poultry Sheds** | | | | | |
| South Facing and well ventilated  North Facing and moderate ventilation  Other facing and Electric Fan facilities | 10 (50.0)  6 (30.0)  4 (20.0) | | 12 (60.0)  6 (30.0)  2 (10.0) | | 22 (55.0)  12 (30.0)  6 (15.0) |
| **Disposal of Animal Wastage and Liter** |  | |  | |  |
| Dip in a Pit  Drain out  Sold  Use at Fertilizer in crop field | 6 (30.0)  3 (15.0)  2(10.0)  9 (45.0) | | 4 (20.0)  2 (10.0)  4 (20.0)  10 (50.0) | | 10 (25.0)  5 (12.5)  6 (15.0)  19 (47.5) |
| **Source: Field survey,2022** (Figures in the Parenthesis indicates Percentage of total farm owners) | | | | | |

The highest number of farm owners of both **t**ype of farms reported that, they used Shawn/straw made poultry house which stood at about 60 percent to 70 percent where it stood at 20 percent semi-pucca tin shed and 15 percent is for part of structured building. In case of feeder and drinker management system all the farm owners normally used stand size and n number for equitable distribution to all birds under the farms. Other hand, both type of farm owners made their poultry shed in south facing on average about it 55 percent. Most of the farm owners managed their farm disposal as about 50 percent as used at fertilizer in their crop field and someone managed it in other treatment process as reported in the above Table-11.

## 4.2.5 Water, Feeds and Feeding practices of the Farms Owners

## Watering and feeding practices are a prime requirement of the commercial poultry farming practices. In this regard found that most of the readymade mixed mesh feed about 50.0 percent and 27.5 percent farm owners used pellet feed to their reared birds. About 40 percent of farm owners used feed supplement in the feeds and 20 percent reported growth promoter they used and it is highest for broilers.

## Table-12: Water, feeds and feeding practices in both broiler and sonali chicken farms.

|  |  |  |  |
| --- | --- | --- | --- |
| **Particulars of Variables** | **Type of Poultry Farms** | | |
| **Broiler**  **N =20** | **Sonali Chicken**  **N=20** | **All**  **(N=40)** |
| **Types and Sources of Feed**  Readymade mixed mesh feed  Own formulated mixed mesh Feed  Readymade Pellet Feed | 8 (40.0)  5 (25.0)  7 (35.0) | 12 (60.0)  4 (20.0)  4 (20.0) | 20 (50.0)  9 (22.5)  11 (27.5) |
| **Used Feed Supplement to the birds**  Not use at all  Use in addition as feed additives  Use growth promoter | 9 (45.0)  6 (30.0)  5 (20.0) | 7(35.0)  10(50.0)  3 (15.0) | 16 (40.0)  16(40.0)  8 (20.0) |
| **Types of sources of Water facilities**  Pond water  Well water  Deep Tube well water | 3 (15.0)  2 (10.0)  15 (75.0) | 4 (20.0)  3 (15.0)  13(65.0) | 7 (17.5)  5 (12.5)  28 (70.0) |

|  |  |  |  |
| --- | --- | --- | --- |
| **Types of growth promoter**  Vitamin  Minerals | 20 (100.0)  20 (100.0) | 15 (75.0)  12 (60.0) | 35(87.5)  32 (80) |

**Source: Field survey, 2022 (Figures in the Parenthesis indicates Percentage of farm owners)**

In case of water source about 70 percent farms were applied Deep tube well as water source and almost 100 percent broiler and 67.5 percent sonali farmers applied mixed vitamins and minerals in water for promoting drinking system to the birds (table-12).

## 4.2.6 Temperature schedule

It was seen that most of the farmer used thermometer for measuring temperature. The recorded temperature schedule has been maintained by the farmers as following against respective age of the birds. Most of the farm owners maintained standard temperature schedule as per ages of birds in weeks as per Table-13.

**Table-13 Schedule of temperature for brooding of birds.**

|  |  |  |
| --- | --- | --- |
| **Age of Birds**  **(in weeks)** | **Temperature of Brooding Broiler** | **Temperature of Brooding**  **Sonali** |
| 0-1 | 90ºF | 95ºF |
| 1-2 | 85ºF | 90ºF |
| 2-3 | 80ºF | 85ºF |
| 3-4 | 75ºF | 80ºF |
| 4-5 | 75ºF | 75ºF |
| Above 6 weeks | - | 70ºF |
| **Source: Field Survey, 2022.** | |  |

## 4.2.7 Litter Management system

## Liter management is also important for farming. Nature of litter in broiler houses is given adequate accentuation since litter conditions essentially impact grill execution and, at last, the benefits of producers and integrators. All farmers had maintained rice husk as bed and its depth varied as per seasonal temperature showed in Table-14.

## Table-14 Depth of litter

|  |  |  |
| --- | --- | --- |
| **Litter material** | **Depth** | |
| **In winter** | **In summer** |
| Rice husk | 1.5-2 inch | 1 inch |

**Source: Field Survey, 2022**

**4.2.8 Nature of Feed and Feeding Practices of Birds**

More feed utilization, more weight gained. The chicks ought to be given little amount of feed every now and again for the 1stweek. The poultry farmers utilized the accompanying way for taking care of the broiler and Sonali Chicken farming in the study areas. All the studied farm owners maintained their reared birds feeding practices in the form of mesh/crumble and finally as pellet form after buying from agents of feed company. Feeding practices of both type farming practices almost same in nature. Sometimes varied per day feed requirement and frequencies of feeding delivery time schedule.

## Table-15 Feeding practices of broiler and sonali farming system

|  |  |
| --- | --- |
| **Ages of Birds**  **(in Week)** | **Nature of feed** |
| First | Crumble |
| Second | Crumble |
| Third | Pellet |
| Fourth | Pellet |
| Fifth to above | Pellet |

**Source: Field Survey, 2022**

## The feeding practices are recorded from the feed chart sheet of the respective farms and found that up to 2nd week both Broiler and Sonali chicken farm owners gave crumble feed and after time up to matured and selling both are given the pellet feeds from the local market but amount of feed varied in broiler to Sonali chickens farming practices.

## 4.2. 9 Weight gain of birds

## After proper feeding practiced to the respective both type of standard weight gained up to maturity are recorded by the farm owner and when its stood at desired weight then the farmers sold the birds to whole seller in cash transaction system. But sometimes whole seller purchases the birds in partially kind and immediate 4-5 days all dues to paid the farmer’s bank account or in Bikash system.

****

**Figure-4: Graphical presentation of weight gain in broiler farm**

## 4.2.10 Bird’s Health Maintenance Program

A health program is fundamental for successful poultry production. Under health program respective farmers-maintained vaccination & used foot bath (1% ppm) in front of the shed.

## Table-16Adopted Vaccination schedule to the Birds (Brioler and Sonali).

|  |  |  |
| --- | --- | --- |
| **Age of Birds**  **(in days)** | **Type of Vaccine (Trade)** | **Route /where to apply** |
| First day | Marek’s (at hatchery) | S/C at neck |
| Third day | BCRDV | Eye drop |
| Seventh day | Gumboro (228E) | Eye drop |
| Fourteenth day | Gumboro (228E) | Eye drop |
| Twenty First day | BCRDV | Eye drop |
| Twenty Eighth day | ND-Killed | S/C at neck |

**Source: Field Survey, 2022**

The recorded above vaccination program were applied for both Broiler and Sonali Chicken farming system and almost same vaccination schedule were applied in the study area in Narsingdi District. This vaccination program were strictly maintained by the farmers otherwise its lead to bird mortality rate which made loss or reduce profit margin of the farmers.

**4.2.11 Marketing information of live broiler and sonali birds**

Marketing or Selling is the important matter for commercial poultry farm owners as if delayed to sell birds after maturity it leads to risk to the farmers. Broilers in this area were raised and sold when age at 4-5 weeks and Sonali at 8-10 weeks of age either at the nearby market or at the rancher doorstep to individual and neighborhood poultry traders. They noticed Day Old Chicks (DOC) price, Feed cost per kg and current live bird sold price per kg accounted in Table-17.

**Table-17 Farm wise overall marketing information of Broilers and Sonali chicken.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Farm Location** | **Farm ID** | **Purchase cost**  **per chick** | | **Feed cost**  **per kg** | | **Live bird sold price per Kg** | | **Days of selling Birds** | |
| Broiler | Sonali | Broiler | Sonali | Broiler | Sonali | Broiler | Sonali |
|  | Farm-1 | 35 | 33 | 62 | 58 | 150 | 260 | 32 | 60 |
| **Location-1 (Belabo)** | Farm-2 | 36 | 35 | 62 | 59 | 145 | 260 | 31 | 60 |
| Farm-3 | 35 | 33 | 62 | 59 | 152 | 240 | 32 | 55 |
| Farm-4 | 35 | 33 | 62 | 58 | 153 | 260 | 35 | 55 |
| Farm-5 | 35 | 35 | 60 | 59 | 160 | 250 | 31 | 57 |
| **Location-2 (Monohordi)** | Farm-6 | 35 | 33 | 62 | 59 | 152 | 240 | 34 | 34 |
| Farm-7 | 35 | 35 | 62 | 58 | 148 | 260 | 35 | 57 |
| Farm-8 | 35 | 33 | 60 | 58 | 150 | 250 | 32 | 54 |
| Farm-9 | 35 | 33 | 62 | 59 | 160 | 230 | 32 | 55 |
| Farm-10 | 35 | 35 | 62 | 58 | 150 | 240 | 33 | 50 |
| **Location-3 (Raipura)** | Farm-11 | 36 | 33 | 60 | 59 | 147 | 230 | 29 | 55 |
| Farm-12 | 36 | 33 | 62 | 59 | 152 | 240 | 35 | 55 |
| Farm-13 | 35 | 35 | 62 | 59 | 150 | 240 | 34 | 57 |
| Farm-14 | 35 | 34 | 62 | 59 | 150 | 240 | 35 | 55 |
| Farm-15 | 36 | 34 | 62 | 58 | 160 | 250 | 36 | 55 |
| **Location-4**  **(Shibpur)** | Farm-16 | 34 | 32 | 60 | 60 | 162 | 245 | 32 | 57 |
| Farm-17 | 35 | 34 | 60 | 58 | 155 | 240 | 34 | 58 |
| Farm-18 | 36 | 35 | 60 | 61 | 160 | 235 | 30 | 59 |
| Farm-19 | 35 | 30 | 60 | 60 | 162 | 230 | 32 | 54 |
| Farm-20 | 34 | 30 | 60 | 58 | 165 | 245 | 36 | 58 |
| **All** | | **35.15** | **33.40** | **61.2** | **58.8** | **154.20** | **244.25** | **33** | **55** |

**Source: Field survey, 2022**

As per estimated data, in case of broiler farming found the average prices of Day Old Chicks(DOC), per kg broiler feed and per kg mature live broiler prices were found as in Tk.35.15, Tk. 61.20 and Tk.154.20 respectively where the average prices of Day Old Chicks(DOC), per kg broiler feed and per kg mature live Sonali prices as it stood at Tk.33.40, Tk. 58.80 and Tk.244.25 respectively in Sonali farm owners reported inTable-17.

**Figure-5: Farm wise overall marketing information of Broiler and Sonali farms.**

The result indicated that, broiler chicks and feed cost comparatively found highest than that of sonali chicken but in case of live bird sonali per kg market price be higher than that of broiler one. Interesting FCR is lower in Broiler than that of Sonali chicken and need to rear Sonali is higher days than that of Broiler farming system.

**4.3 Farm wise comparative production and economic performances of Broiler and Sonali farming**

The success of poultry farm depends on proper management of farm resource utilization and ensuring better services to the birds rearing system. In this section discussed and analyzed the collected data on production, housing, feeding and management systems of both type of farming practices. In this section included production and economic performance indicators of both type of farms as per recorded individual farms by locations were as follows:

**4.3.1Comparative** p**roduction performances of broiler and sonali chicken**

**4.3.1.1Farm wise body weight & Feed intake of broiler**

Information of day-old chick weight and live broiler weight at market age was accounted. Day old birds with 20 to 75gm body weight were stacked in the homesteads and birds were sold with 1600 to 2400gm body weight at advertising. Oven birds were advertising at 30 days old to 35 days. In our investigation most elevated body weight was discovered 2.4 kg in Farm-11 while least body weight 1.6 kg was found in Farm-1, and Farm-13. Measure of feed admission was discovered 3.8kg in Farm-5, Farm-11, 3.5 kg in Farm-4 and Farm-7, Farm-10 and Farm-14 while least 3.1kg in Farm-1 and 3.

**4.3.1.2Farm wise body weight and feed intake sonali chicken**

Day old birds with 15 to 40gm body weight were stacked in the homesteads and birds were sold with 700 to 900gm body weight at advertising. In our investigation most elevated body weight was discovered .9 kg in Farm-5 and Farm-8, while least body weight 78 kg was found in Farm-1, Farm-2 and 7.

**4.3.1.3 Farm wise Feed Efficiency or Feed Conversion Ratio of broiler and sonali**

Feed efficiency/Feed conversion ratio is an important measure for making success of poultry industry with least cost combination production system with a view to maximize farm profit.

Total quantity of feed consumed per bird in kg

**FCR** =

Body weight gain per bird in kg

A value of 1.6 or lesser at 5 weeks of age is preferable for selling as per consumer demand size. In this study the highest FCR was also found 2 in Farm-13 & 1.8 in Farm-1, whereas lowest FCR 1.6 was found in Farm- 4 & Farm-11. In case of sonali farms a value of 6 or lesser at 8 weeks of age is preferable for selling as per consumer demand size. In this study the highest FCR was found 2.3 in Farm-2 & Farm-4, whereas lowest FCR 1.6 was found in Farm- 11.

**Table-18 Farm wise production performance indicators of broiler Farming system.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Farm Location** | **Farm ID** | **Production Performances indicators of Broiler birds** | | | | |
| **Body weight**  **in kg** | **Feed intake per birdinkg** | **FCR** | **Mortality rate %** | **Livability rate %** |
| **Location -1 (Belabo)** | Farm-1 | 1.7 | 3.1 | 1.82 | 2.67 | 97.33 |
| Farm-2 | 2.0 | 3.4 | 1.70 | 0.80 | 99.20 |
| Farm-3 | 1.8 | 3.2 | 1.78 | 1.25 | 98.75 |
| Farm-4 | 2.4 | 3.5 | 1.45 | 2.00 | 98.00 |
| Farm-5 | 2.2 | 3.8 | 1.73 | 2.40 | 97.60 |
| **Location -2 (Monohordi)** | Farm-6 | 2.0 | 3.4 | 1.70 | 2.40 | 97.60 |
| Farm-7 | 2.0 | 3.5 | 1.75 | 1.33 | 98.67 |
| Farm-8 | 2.1 | 3.4 | 1.62 | 1.00 | 99.00 |
| Farm-9 | 1.8 | 3.2 | 1.78 | 3.33 | 96.67 |
| Farm-10 | 2.2 | 3.5 | 1.59 | 2.00 | 98.00 |
| **Location-3 (Raipura)** | Farm-11 | 2.4 | 3.8 | 1.58 | 0.85 | 99.15 |
| Farm-12 | 2.0 | 3.4 | 1.70 | 1.30 | 98.70 |
| Farm-13 | 1.7 | 3.2 | 1.88 | 0.80 | 99.20 |
| Farm-14 | 2.0 | 3.5 | 1.75 | 1.10 | 98.90 |
| Farm-15 | 2.1 | 3.4 | 1.62 | 2.50 | 97.50 |
| **Location -4**  **(Shibpur)** | Farm-16 | 1.7 | 3.0 | 1.71 | 1.30 | 95.50 |
| Farm-17 | 1.8 | 3.12 | 1.73 | 2.65 | 94.33 |
| Farm-18 | 2.1 | 3.41 | 1.72 | 2.43 | 97.50 |
| Farm-19 | 1.9 | 3.20 | 1.68 | 0.82 | 98.20 |
| Farm-20 | 2.0 | 3.46 | 1.72 | 1.12 | 92.50 |
| **All average** | | **1.99** | **3.37** | **1.69** | **1.70** | **97.62** |

**Source: Field survey, 2022**

**4.3.1.4Mortality rate**

Mortality rate of chosen ranches went from 0.80 to 3.33%. The mortality in this examination is discovered higher in Farm-1, and Farm-9. Lower mortality rate was found in Farm-2, Farm-13, and Farm-14 for broiler farm. In case of sonali chicken, the highest mortality was 3.5% and it found in farm-10 and lowest 2.1% in farm-9 which resultant from livability of the stock.

**4.3.1.5Livability rate**

Livability rate is also an important production which leads to farm profitability and reduce physical risk in farming practices. It is calculated by the following formulae-

Number of birds sold

Livability % = x 100

Number of birds at the beginning

Higher the livability rate lowers farm profitability and vice-versa.

**Table-19 Farm wise production performance indicators of sonali birds.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Farm Location** | **Farm ID** | **Per bird production performances of Sonali Chicken** | | | | | | | |
| **Body weight**  **in kg** | **Feed intake per bird in kg** | **FCR** | | **Mortality rate %** | | **Livability rate %** | |
| **Location -1 (Belabo)** | Farm-1 | 0.70 | 2.05 | | 2.92 | | 3.00 | | 97.00 |
| Farm-2 | 0.70 | 2.10 | | 3.00 | | 2.90 | | 97.10 |
| Farm-3 | 0.80 | 2.10 | | 2.62 | | 3.00 | | 97.00 |
| Farm-4 | 0.70 | 2.10 | | 3.00 | | 2.80 | | 97.20 |
| Farm-5 | 0.90 | 2.10 | | 2.33 | | 3.00 | | 97.00 |
| **Location -2 (Monohordi)** | Farm-6 | 0.80 | 2.10 | | 2.62 | | 3.10 | | 96.90 |
| Farm-7 | 0.70 | 2.10 | | 3.00 | | 2.50 | | 97.50 |
| Farm-8 | 0.90 | 2.10 | | 2.33 | | 3.00 | | 97.00 |
| Farm-9 | 0.80 | 2.05 | | 2.56 | | 2.10 | | 97.90 |
| Farm-10 | 0.80 | 2.10 | | 2.62 | | 3.50 | | 96.50 |
| **Location-3 (Raipura)** | Farm-11 | 0.90 | 2.05 | | 2.27 | | 2.40 | | 97.60 |
| Farm-12 | 0.80 | 2.05 | | 2.56 | | 3.10 | | 96.90 |
| Farm-13 | 0.80 | 2.05 | | 2.56 | | 2.50 | | 97.50 |
| Farm-14 | 0.80 | 2.05 | | 2.56 | | 3.00 | | 97.00 |
| Farm-15 | 0.80 | 2.05 | | 2.56 | | 3.00 | | 97.00 |
| **Location -4**  **(Shibpur)** | Farm-16 | 0.85 | 2.15 | | 2.52 | | 3.00 | | 95.45 |
| Farm-17 | 0.80 | 2.1 | | 2.62 | | 3.50 | | 96.50 |
| Farm-18 | 0.77 | 2.05 | | 2.66 | | 3.15 | | 94.00 |
| Farm-19 | 0.72 | 2.13 | | 2.96 | | 2.95 | | 94.50 |
| Farm-20 | 0.82 | 2.10 | | 2.56 | | 2.70 | | 92.50 |
| **All average** |  | **0.83** | **2.084** | | **2.506** | | **2.91** | | **96.50** |

**Source: Field survey, 2022.**

**Source: Field survey, 2022.**

Data revealed that the average live weights per bird was found about 2.01 and 0.79 kg in broiler and sonali respectively. It was found that average feed intake per bird was 3.44 and 1.55 kg, respectively. The livability and mortality rate was found 98.35 and 1.65 per cent and97.14 and 2.86 per cent respectively. The Feed Conversion Ratio (FCR) was recorded as 1.72, 1.98 and the average marketing age of birds were 33, 55 days, respectively.

**4.3.2 Farm wise comparative Economic Performance Indicators of broiler and sonali Chicken**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Farm Location** | **Farm ID** | **Economic Performances of Broiler per bird** | | | | | | |
| **BPEF** | **BFEI** | | **Gross Cost**  **per bird Tk.)** | **Gross Return**  **per bird Tk.)** | **Net profit per bird (Tk.)** | **BCR** |
| **Location -1 (Belabo)** | Farm-1 | 93.40 | | 9.09 | 239.12 | 261.6 | 22.48 | 1.09 |
| Farm-2 | 117.64 | | 11.67 | 258.01 | 306.6 | 48.59 | 1.18 |
| Farm-3 | 101.12 | | 9.98 | 245.61 | 276.6 | 30.99 | 1.12 |
| Farm-4 | 165.51 | | 16.22 | 264.21 | 366.6 | 102.5 | 1.38 |
| Farm-5 | 127.16 | | 12.41 | 275.21 | 358.6 | 83.39 | 1.30 |
| **Location -2 (Monohordi)** | Farm-6 | 117.64 | | 11.48 | 258.01 | 306.6 | 48.59 | 1.18 |
| Farm-7 | 114.28 | | 11.27 | 264.21 | 306.6 | 42.39 | 1.16 |
| Farm-8 | 130.43 | | 12.91 | 251.21 | 321.6 | 70.39 | 1.28 |
| Farm-9 | 101.12 | | 9.77 | 245.61 | 276.6 | 30.99 | 1.12 |
| Farm-10 | 138.36 | | 13.55 | 264.21 | 336.6 | 72.39 | 1.27 |
| **Location-3 (Raipura)** | Farm-11 | 151.89 | | 15.06 | 275.21 | 366.6 | 91.39 | 1.33 |
| Farm-12 | 117.64 | | 11.61 | 257.93 | 306.6 | 48.67 | 1.18 |
| Farm-13 | 90.42 | | 8.90 | 245.61 | 261.6 | 15.99 | 1.06 |
| Farm-14 | 114.28 | | 11.30 | 264.21 | 306.6 | 42.39 | 1.16 |
| Farm-15 | 130.43 | | 12.71 | 258.01 | 342.6 | 84.59 | 1.32 |
| **Location -4**  **(Shibpur)** | Farm-16 | 99.41 | | 9.49 | 227.21 | 282 | 54.79 | 1.24 |
| Farm-17 | 104.04 | | 9.81 | 234.41 | 285.6 | 51.19 | 1.21 |
| Farm-18 | 122.09 | | 11.90 | 251.81 | 342.6 | 91.39 | 1.36 |
| Farm-19 | 113.09 | | 11.10 | 239.21 | 313.4 | 74.19 | 1.31 |
| Farm-20 | 116.27 | | 10.75 | 254.81 | 336.6 | 81.79 | 1.32 |
| **All average**  **Source: Field Survey, 2022** | | **118.31** | | **11.54** | **215.71** | **270.27** | **54.56** | **1.22** | |

In this part analyze the probable economic indicators of poultry farming practices in the study areas. The economic performance indicators were included here as Performance Efficiency Factor (PEF), Farm Economic Index (FFI), Cost per Bird, Gross Return (GR) per bird, Net Return per bird and Benefit Cost Ratio(BCR) per bird by study locations.

**Table-20: Farm wise economic performance indicators of broiler farming.**

**4.3.2.1 Performance Efficiency Factor (PEF)**

The performance efficiency factors were calculated by applying the following formula-

Per bird average live weight in kg

PEF = x100

Feed efficiency

Higher the value better will be the index. A value of 100 or more is desirable.

**4.3.2.2 Farm wise comparative Economic Performance Indicators of broiler and sonali chicken**

In this study Performance Efficiency Factor (PEF) varied from 80.80 to 145.94 and 30.00 to 50.94 for broiler and sonali chicken, respectively. In this examination, the Broiler performance efficiency factor(BPEF) was found higher in Farm-4 and Farm-11 and the Sonali performance efficiency factor(SPEF)was found higher in Farm-8 and Farm-11 whereas this investigation was found lower in BPEF in farm-1, Farm-13 and lower SPEF was found in farm Farm-2, Farm-4.

**4.3.2.3 Farm wise comparative Performance Efficiency Factor (PEF)**

In this part analyze the Performance Efficiency Factor (PEF) of broiler and sonali chicken of the studied farms and presented in Table-20 and Table-21. The results revealed that the highest BPEF 165.51 is found in farm 4 and the lowest BPFE 90.0 in farm-13 on the other hand incase of sonali chicken it was found the highest 39.5 in farm 11 and the lowest 23.33 in farm-2, farm-4 & farm-7.

**4.3.2.4Farm wise comparative farm economy index (FEI)**

In this part analyze the Farm Economy Index (FEI) of broiler and sonali chicken of the studied farms and presented in Table-20 and Table-21. The results revealed that the highest BFEI16.22 is found in farm-4 and the lowest BEFI 8.90 in farm-13 on the other hand incase of sonali chicken it was found the highest 3.85 in farm 9 and the lowest 2.27 in farm-7.

**4.3.2.5 Farm wise Comparative Cost of rearing per bird**

Cost includes per bird including lodging, inoculation, drug, power, feed and chick cost. Contingent upon the accessibility, market interest of breeds, DOC, Feed, Litter, and Medicine and so on differed time to time according to creation capacity and accessibility in the separate market.

**Table-21 Farm wise economic performance indicators of sonali chicken.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Farm Location** | **Farm ID** | **Production Performances of Sonali per bird** | | | | | | | | | | |
| **SPEF** | **SFEI** | | **Gross Cost per bird (Tk.)** | | **Gross Return per bird (Tk.)** | | **Net profit per bird (Tk.)** | | **BCR** |
| **Location -1 (Belabo)** | Farm-1 | 23.97 | | 2.31 | | 164.55 | | 187.00 | 22.45 | 1.13 | | |
| Farm-2 | 23.33 | | 2.26 | | 170.35 | | 187.00 | 16.65 | 1.09 | | |
| Farm-3 | 30.47 | | 2.95 | | 170.35 | | 197.00 | 26.65 | 1.15 | | |
| Farm-4 | 23.33 | | 2.26 | | 168.25 | | 187.00 | 18.75 | 1.11 | | |
| Farm-5 | 38.62 | | 3.74 | | 170.35 | | 230.00 | 59.65 | 1.35 | | |
| **Location -2 (Monohordi)** | Farm-6 | 30.47 | | 2.95 | | 170.3 | | 197.00 | 26.7 | 1.15 | | |
| Farm-7 | 23.33 | | 2.27 | | 168.25 | | 187.00 | 18.75 | 1.11 | | |
| Farm-8 | 38.62 | | 3.74 | | 167.4 | | 230.00 | 62.6 | 1.37 | | |
| Farm-9 | 31.22 | | 3.85 | | 170.35 | | 189.00 | 18.65 | 1.10 | | |
| Farm-10 | 30.47 | | 2.94 | | 167.4 | | 197.00 | 29.6 | 1.17 | | |
| **Location-3 (Raipura)** | Farm-11 | 39.50 | | 3.05 | | 167.4 | | 212.00 | 44.6 | 1.26 | | |
| Farm-12 | 31.22 | | 3.02 | | 167.4 | | 197.00 | 29.6 | 1.17 | | |
| Farm-13 | 31.22 | | 3.04 | | 167.4 | | 197.00 | 29.4 | 1.17 | | |
| Farm-14 | 31.22 | | 3.02 | | 165.35 | | 197.00 | 31.65 | 1.19 | | |
| Farm-15 | 31.22 | | 3.02 | | 175.45 | | 205.00 | 29.55 | 1.16 | | |
| **Location -4**  **(Shibpur)** | Farm-16 | 33.61 | | 3.20 | | 170.35 | | 208.25 | 37.9 | 1.22 | | |
| Farm-17 | 30.47 | | 2.94 | | 171.5 | | 197.00 | 25.5 | 1.14 | | |
| Farm-18 | 28.92 | | 2.71 | | 172.45 | | 185.95 | 13.5 | 1.07 | | |
| Farm-19 | 24.32 | | 2.29 | | 174.25 | | 170.6 | 3.65 | 0.97 | | |
| Farm-20 | 32.03 | | 2.96 | | 168.25 | | 205.9 | 37.65 | 1.22 | | |
| **All average** |  | **24.19** | | **2.92** | | **150.45** | | **175.15** | **25.30** | **1.16** | | |

**Source: Field survey, 2022.**

**Total Cost of all farms(TC)**

**Cost incurred per bird per farm =**

**Total no of birds in all farms**

On the lookout, the expense cost varied all through the investigation time frame. Cost include/bird of chosen ranches went from 189.23 to 237.23 Tk. Cost included per bird of this investigation is found higher in Farm-5, farm-11 and lower in Farm-16 in broiler farming. On the other hand, the expensed cost varied all through the investigation time frame. Cost includes per bird of chosen ranches went from 145.302 to 157.20 Tk. Cost incurred per bird in this investigation was found higher in Farm-20 and lower in Farm-14 in sonali chicken farming.

**4.3.2.6 Farm wise Comparative Returns and BCR per Bird**

Return per Bird was estimated as body weight respective bird multiplied by per kg live bird selling price in each. It was found that, the return per bird varied from farm to farm due to variation in live bird weights and market prices. In this study it was found that the highest return per bird Tk. 323.77in Farm-11 and lowest return per bird 218.77 Tk. from Farm-1 & Farm-13 in broiler farms where in case of sonali chicken farming the gross return per bird stood at the highest return per bird Tk. 206.97 in Farm-5, 8 and the accounted lowest return per bird Tk. 147.57 in Farm-19.

In case of estimating Net Return (NR), it was calculated as Net Return/Profit = TR-TC. In this study, net profit per bird was found ranged from Tk. 20.71 to Tk. 89.62 in broiler and the highest profit per bird was Tk. 89.62 tk. for Farm-11 and lowest was 20.71 tk. for farm-1.In case of sonali chicken it stood the highest amounted Tk.59.55in Farm-05 and the lowest Tk. 15.45 in two farms –(farm-18 and farm-19).

**4.3.2.7 Farm wise Estimated Benefit Cost Ratio (BCR)**

Benefit Cost Ratio (BCR) have estimated simply using the following formulae-

**Total Benefits**

**Benefit Cost Ratio (BCR)**=

**Total Cost**

BCR<1, indicates option generate losses

BCR=1, indicates investment option is neither profitable nor lossy

BCR>1, indicates investment option is profitable

In case of broiler in this examination, the evaluated BCR was found higher (1.38) in Farm-44 and least (1.09) in Farm-1.

**Table-22Per Bird accounted production and economic performances of Broiler**

**and Sonali birds.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Particulars of items** | **Broiler**  **N=20** | **Sonali**  **N=20** | **ALL (N=40)** | | | |
| **Broiler** | | **Sonali** | |
| **Maximum** | **Minimum** | **Maximum** | **Minimum** |
| Live weight per bird (Kg) | 1.99 | 0.83 | 2.40 | 1.70 | 0.90 | 0.70 |
| Feed intake per bird (Kg) | 3.37 | 2.08 | 3.8 | 3.0 | 2.15 | 2.05 |
| Feed Conversion Ratio FCR | 1.69 | 2.51 | 1.88 | 1.45 | 3.00 | 2.33 |
| Feed cost @Tk.50/-per kg | 168.50 | 104.00 | 54.00 | 45.00 | 55.00 | 45.00 |
| Mortality rate (%) | 1.65 | 2.91 | 3.33 | 0.80 | 3.50 | 1.50 |
| Livability rate (%) | 97.62 | 96.50 | 99.20 | 92.50 | **97.60** | 92.50 |
| Average Flock size (Number) | 1660 | 1695 | 3500 | 1000 | 2800 | 1000 |
| Av. marketing age (in days) | 33 | 55 | 36 | 29 | 60 | 50 |
| Broiler and Sonali Performance Efficiency Factor(BPEF & SFEI) | 38.23 | 30.64 | **50.63** | 30.00 | 54.00 | 30.63 |
| Broiler Farm Economy Index (BFFI & SFEI) | 3.18 | 2.35 | 3.82 | 2.36 | 3.81 | 2.59 |
| **Gross Cost per bird (Tk.)** | **215.71** | **150.45** | **264.21** | **227.21** | **175.45** | **164.45** |
| **Gross Return per bird (Tk.)** | **270.27** | **175.15** | **366.6** | **261.6** | **230** | **170.6** |
| **Net profit per bird (Tk.)** | **54.56** | **25.30** | **102.5** | **15.99** | **59.65** | **- 0.365** |
| **Benefit-Cost Ratio (BCR) (Undiscounted)** | **1.22** | **1.16** | **1.38** | **1.06** | **1.37** | **0.97** |

**Source: Field Survey, 2022.**

In addition, in case of sonali the evaluated BCR was found higher (1.37) in Farm-8 and least (0.97) in Farm-19. Where the average BCR between broiler and sonali were estimated 1.22 and 1.16 respectively considering all farms both type of poultry farming system.

**Figure-6: Overall Comparative Cost and Returns**

**Table-23 Accounted Cost per Bird in Broiler and Sonali Farming system considering all farms in each category.**

|  |  |  |
| --- | --- | --- |
| **Particulars of Cost items** | **Cost of per bird Broiler Farm**  **(N=20)** | **Cost of per bird**  **Sonali Farm**  **(N=20)** |
| 1. **Variable cost** |  |  |
| Chick Cost | 35.29 (16.36) | 33.8 (22.47) |
| Feed Cost | 168.5 (78.11) | 104 (69.13) |
| Medicine Cost | 1.18 (0.55) | 1.00 (0.66) |
| Mineral, Vitamins and premix etc. | 0.19(0.09) | 0.18 (0.12) |
| Shed Cleaning Cost | 0.36 (0.17) | 0.36 (0.24) |
| Litter Cost | 0.76 (0.35) | 0.76 (0.51) |
| Labor Cost | 1.41 (0.65) | 1.41 (0.94) |
| Disinfectant | 0.16 (0.07) | 0.16 (0.11) |
| Brooding & Heating cost | 0.52 (0.24) | 0.52 (0.35) |
| Electricity Charges | 0.35 (0.16) | 0.35 (0.23) |
| Miscellaneous Expenses | 0.50 (0.23) | 0.50 (0.33) |
| Interest on working Capital | 3.38 (1.57) | 4.38 (2.91) |
| **Total Variable Cost (TVC)** | **212.60 (98.56)** | **147.42 (97.99)** |
| **B. Fixed Cost:** |  |  |
| Rental Value of land/house: | 0.90(0.42) | 0.88 (0.48) |
| Depreciation cost of fixed assets | 0.74 (0.34) | 0.72 (0.32) |
| Repairs and maintenance cost | 0.49 (0.23) | 0.48 (0.63) |
| Interest on Fixed Capital: | 0.97 (0.45) | 0.95 (0.88) |
| **Total Fixed Cost (TFC)** | **3.11(1.44)** | **3.03 (2.01)** |
| **Total Cost (TC) (A+B)** | **215.71 (100.00)** | **150.45 (100.00)** |

**Source: Field survey, 2022. (Figures in the parentheses indicates respective percentage**

The Broiler Performance Efficiency Factor (BPEF) and sonali performance efficiency factor 118.20 and 40.85. In addition, the Broiler and sonali Farm Economy Index (BFEI) were found 3.24 and 2.90 respectively. At last, the benefit cost ratio of broiler and sonali were 1.48 and 1.10. Borah and Halim (2017) reported that on an average, the broiler chicken meat produced per bird was 2.18 kilogram. Dahake et al. (2016) reported that the benefit-cost ratio was 1.15. Singh (2017) reported that the average body weight at 42.21 days of age was 1.80 and FCR was 1.60 and the livability per cent was 95.00 per cent.

This is in consonance with the findings of Akther et al. (2009) where the authors reported that the fixed cost accounted for 3.20 per cent and 96.80 per cent was variable cost. Kumar (2013) reported that, the fixed and variable cost share in total cost of production 3.76 and 96.23 were in non-contract farming. The amounted Total Cost (TC) per bird was accounted Tk.166.81 and Tk 107.95, respectively.

**Figure-7: Graphical presentation of BCR**

The data in the Table-22 indicated the gross return from broiler and sonali were TK. 308.74 and TK. 199.74 per bird respectively. Rahman et al. (2016) reported that 97.75 per cent of the obtained gross return was from the sale of broiler birds. Kumar (2013) reported that 97.86 and 77.97 per cent of the gross return was from the sale of broiler birds. Gopala et al. (2017) reported that in contract farming Rs.6.46 was the gross returns per kilogram which constituted 88.85 per cent of the returns from the sale of broiler birds and 11.15 per cent was from the sale of manure and gunny bags.

**Table-24 Estimated Returns per Bird of broiler and sonali chicken farming**

**system**

|  |  |  |
| --- | --- | --- |
| **Particulars of return** | **Broiler** | **Sonali Chicken** |
| Average live weight of sold Birds (Kg) | 1.99 | 0.83 |
| Average live bird selling price per kg (Tk.) | 132.50 | 205.00 |
| Sale proceeds from Broiler birds (Tk.) | 263.675 | 170.15 |
| Sale proceeds from manure (Tk.) | 4.50 | 3.50 |
| Sale proceeds from empty bags etc. (Tk.) | 2.10 | 1.50 |
| Gross Returns per Bird (Tk.) | 270.275 | 175.15 |
| Gross Margin (GM) over TVC (Tk.) | 57.675 | 27.73 |
| Net Return over TC (Tk.) | 54.57 | 22.73 |
| **BCR (Un-discounted)** | **1.22** | **1.16** |

**Source: Field Survey, 2022.**

The gross returns obtained in the present study were comparatively higher in broiler farm than sonali chicken as per bird live weight in broiler be higher than sonali chicken. The data in the Table-23 also indicated that the gross return , gross margin over variable cost and net returns per bird in broiler farming were found TK. 270.28, TK. 57.68 and TK. 54.57, respectively and in sonali farming the Gross Return, Gross Margin (GM) and Net Returns per live bird were found TK. 175.15, TK. 27.73 and Tk. 22.73, respectively. The Reddy (2016) reported that the net return was an Rs.8.84 and Rs.1.51for non-contract and contract farm which is in consonance with the findings of the present study. Kumar (2013) reported that Rs.7.15 and Rs.1.99 were the net return in non-contract and contract farming respectively. The study finding supported that return depends most often on market demand for chicken.

CHAPTER-V

## PROBLEM AND PROSPECT OF POULTRY FARMING SYSTEM

**CHAPTER-V**

**PROBLEM AND PROSPECT OF POULTRY FARMING SYSTEM**

## 5.1 Problems of broiler and sonali farming

## The serious issues looked by the broiler farm proprietors included as low status of oven raising, oven contaminates climate, oven make family disturbance, out-break of sickness, non-accessibility of medication and antibody, deficient information on oven diet, low cost of live weight oven, not lifting oven at contract producers advantageous time, promulgation against oven meat, non-accessibility of day-old-chicks, excessive cost of feed, muddled methodology in endorsing credit for oven shed, exorbitant cost of chicks, power issue, space issue, the executives issue and assault by savage animals and so forth Issues of merchants incorporate transportation issues, feed issues, insufficient advertising offices, absence of market data, lower market cost, troublesome political condition, deficiency of broiler chicken, tips and gift and so on as under:

## Table-25 Identified Poultry farming problems of both broiler and sonali chickens

## farming system in the study areas.

|  |  |  |
| --- | --- | --- |
| Problems | Frequency[N=40] | Percentage[%] |
| Variability in chick Quality | **23** | **56.67** |
| Variability in feed quality | **27** | **66.67** |
| Unorganized marketing system | **21** | **53.33** |
| Summer stress affecting productivity and survivability | **15** | **36.67** |
| Treatment of diseases | **11** | **26.67** |
| Insufficient bank loan | **12** | **30.00** |
| Lack of quality vaccine | **13** | **33.33** |
| Poor national livestock development policy | **31** | **76.67** |

## Source: Field survey, 2022.

**5.1.1 Irregular supply and fluctuation of price of chicks and live birds**

The expense of day-old chicks is generally unsteady consistently. During 2022, it fluctuated from BDT 18/ - to BDT 45/ - per DOC. Live oven was likewise somewhat unsound around the same time. It differed from BDT-105/ - to BDT 145/ - per Kg live broiler at maker level. About 83.33 percent of poultry farmers reported that which is ranking first out of 30 studied farms the irregular supply and fluctuation of price of chicks and live birds is a crucial problem (table-29). This variety made ranchers miserable and serous dissatisfaction. Value shakiness of the two chicks and live grill was second imperatives (Kawsar, 2014). Change of market cost of grills influenced the benefit, comprised for certain analysts (Raha 2007; Begum and Alam 2009).

**5.1.2 Variability in chick quality**

Absence of chick's quality is a typical grumbling to the farmers. About 56.67percent of poultry farmers reported that which is ranking 4th out of 30 studied farms variability in chick quality is also an important problem (Table-25). Chick quality was the most elevated in scoring among the imperatives of the ranchers (Kawsar et al., 2013 and Chand et al., 2009). Various variables identify with raiser ranch and incubation facility the board influences the quality chick's creation (Chowdhury, 2013). The chicks are conveyed to vendors and specialists after purported reviewing. Chicks of various grades like A, B, C, and so forth unmistakably demonstrate variety in quality (Chowdhury, 2011). Thus, ranchers are getting diverse quality chicks which influence execution. This makes ranchers miserable during the executives and advertising. Quality feeds.

**5.1.3 Variability in feed quality**

It was another major problem for poultry farming of all categories farm holders. All of the poultry farmers depend on commercial feed mill for feed. Having quality feed in time may become a challenge for broiler production. About 66.67percent of poultry farmers reported on that problem which is ranking as 3rd out of 30 studied farms variability in chick quality is also an important problem (Table-25).

**5.1.4 Un-organized marketing system**

Since the ranchers are not efficient and there is no administrative body for them, they need to follow the customary arrangement of advertising which allows this possibility little dealing. Ranchers are denied from legitimate costs of their items as often as possible. The agents exploit. Advertising of live broiler was additionally an issue, and 37% broiler creation is influenced of limited scope oven cultivating (Emaikwu et al., 2011). About 53.33percent of poultry farmers reported on that problem which is ranking in 5th out of studied 40 farms and comment on un-organized marketing system is also an important problem (Table-25).

**5.1.5 Summer stress affecting productivity and survivability**

Fascinating high yielding strains of oven chicks are not heat lenient. The issues are emerged in summer due to temperature raised 350 C to 420C.Therefore, efficiency and survivability are diminished. Along these lines, a few methodologies ought to be applied against heat pressure (Lin et al., 2006). Das et al. (2008) likewise revealed that little ranchers saved their broiler in open sided house for limiting warmth stress but in case of sonali bird this problem is comparatively low. About 36.67percent of poultry farmers reported on that problem which is ranking in 6th out of studied 30 farms and comment on the summer stress affecting productivity and survivability (Table-25).

**5.1.6 Treatment of diseases**

Although counters action is the way to make accomplishment in battling infections (Chowdhury,1984). Treatment of unhealthy birds might be applied now and again. Nonetheless, the quacks and nonqualified work force ought not be engaged with veterinary practices that might influence adversely in poultry cultivating just as productivity. About 26.67percent of poultry farmers reported on that problem which is ranking in 9th out of studied 30 farms and comment on treatment of diseases (Table-25).

**5.1.7Insufficient bank loan**

Since the outbreak of COVID-19, access of farmers to credit facilities has decreased considerably. Financial institutions reduced interest to encourage farmers for poultry farming as well as the recovery of their credit. About 30.00percent of poultry farmers reported on that problem which is ranking in 8th out of studied 30 farms and comment on bank loan facilities (Table-25).

**5.1. Lack of quality vaccine**

Some significant infections can be forestalling by immunization. These sicknesses were forestalled by appropriate inoculation customized in the investigation region yet excessive cost of antibody, ill-advised capacity and inaccessible stock hamper the avoidance of illnesses pervasiveness in examination region. The amount and nature of antibodies accessible against the significant sicknesses were not up to the ideal norm. In any case, the power declined from the locale animal’s office to the Thana animals’ office lastly tumbles to between 45-80% strength at the client's level. About 33.33percent of poultry farmers reported on that problem which is ranking in10th out of studied 30 farms and comment on lack of quality vaccine (Table-25).

**5.1.9Poor National livestock policy**

Our national policy is so weak that hamper the development of broiler and sonali farming system. About 76.67percent of poultry farmers reported on that problem which is ranking in 2nd out of studied 30 farms and comment on poor livestock policy supporting poultry development in Bangladesh for small and marginal farmers (Table-25). Despite the above major problems also identified few minor problems in the study areas as indicated below-

* Shortage of quality feed &proper nutrition.
* Lack of transport facilities and timely marketing.
* Lack of well-established diagnostic lab and postmortem facilities.
* Lack of bio-security knowledge.
* Unavailability of expert consultants.
* Unavailability of drugs and High cost of drug.
* Absence of proper disease control model.
* Acute shortage of veterinary support staff.
* Influence of Drugs Company.
* Influence by feed supplying company.

**5.2 Prospects of broiler and sonali farming in the study regions**

**5.2.1 Generate additional income**

Ranchers react that oven cultivating is an extra pay inside existing residence of them. It was apparent that the entirety of the minimal and little homestead holders viewed cultivating as an extra pay (Miah, 1990).

**5.2.2Profitable cash earning business**

All the farm holders respond in this point well. There is also found similarities in the study of Miah (1990) and Mohd-Shoriff-Saleh (1985).

**5.2.3 Treat as a profession**

Pandey and Tewary, (1985) declare that farming as a profession and a lot of people involves in this sector. Day by day many educated people become involves in this profession.

**5.2.4Increase importance of broiler and sonali farming in Bangladesh**

Farming is the foundation of the economy of Bangladesh. Farming contributes 21.84% interest for adjusted eating regimen. Poultry exceptionally grill is one of the significant sections of agribusiness in Bangladesh. The term poultry is utilized to assign those types of bird which render man a financial help and duplicate openly under his appropriate consideration. At present oven cultivating is delivered for business points of view. It assists with creating work and pay and to construct a destitution free and sound society. In Bangladesh destitution, joblessness and unhealthiness is the significant impediment for advancement. Here significant part of populace lives beneath the destitution line. In our country many taught individuals are joblessness. Our youngsters and moms are casualties of lack of healthy sustenance. At the present circumstance grill cultivating is a decent method of meeting the protein hole, business age and neediness mitigation in the lack conceivable time. It likewise gave monetary advantage. In this way, broiler chicken rearing is one of the most significant arising agro-based farm business in the country for creating self-employment opportunity in Bangladesh.

# 

CHAPTER-VI

**CONCLUSIONS AND RECOMMENDATIONS**

**CHAPTER-V**I

**CONCLUSIONS AND RECOMMENDATIONS**

**6.1 Conclusions**

From the above discussion it tends to be presumed that Raipura, Belabo and Monohordi, Shibpur upazilla under Narsingdi district are entirely reasonable and favorable zone for broiler and Sonali farming. Then, at that point it is feasible to build up broiler ranches to fulfill the protein need of individuals and to eliminate the destitution of individuals setting out work open doors for the joblessness individuals. Government is to make appropriate strides and assume a significant part for foundation of a poultry zone around here by taking care of all issues and offering more chances to the current ranch proprietors. The public authority can take a plan to build up a homestead in each upazila of Bangladesh utilizing which can treat as a poultry model, neighborhood individuals would make their own ranch. At long last, one might say that broiler farming contributed to the rural people by creating self-employment facilities among educated youth and rural unemployed women. In the present study it is observed that farm size-11 for broiler and farm-8 for Sonali are profitable as they provided better management and caring the all sorts of farm practices. Organized marketing facilities for the broiler birds may improve the net returns gained by the farmers which in turn make them to rear broiler and sonali birds independently.

# 6.2 Limitations of the Study

# Main limitation of this study, necessary data had collected from the respective poultry farmers by a single visit only due to shortage of time and costs. Data was collected from the farm records of immediate past batch of reared birds both Broiler and Sonali Chicken. The farmer did not cooperate fully during data collection and always try to hide the actual situations of farming and mislead us by providing data. One other hand main problem was impact of Covid-19 pandemic for collection of data and made the study report in due time for personal family problem.

**6.3 Recommendations**

To overcome the problems of broiler and Sonali farming and to make broiler and Sonali farming more profitable, the following suggestions were made by the farmers:

1. Government should screen the sensible cost of poultry feed and day-old chicks.
2. Facilities of the institutional advance to the proprietors of poultry homesteads ought to be made with the goal that they can get the credit on simple terms.
3. Hatcheries should build the stock of day-old chicks.
4. For legitimate lodging, sustenance, infectious prevention, promoting and the board DLS ought to give transient preparing to the proprietors of the poultry ranches.
5. To keep up with the changing nature of information sources, sellers and specialists must be trained.
6. A strategy ought to be created by the public authority to eliminate unforeseen development advertisers and antimicrobials if there should arise an occurrence of poultry creation. Mindfulness ought to be created against the utilization of such Antibiotics or Antibiotics development advertisers.
7. Government should provide loans on easy terms and conditions in poultry sector. The support of financial institutions will help broiler farm owners to purchase modern tools and equipment as well as making better housing facilities for the broilers.
8. Availability of quality day-old-chicks at the right time is a major problem in continuing broiler business. Therefore, the breeder farms should make necessary arrangement for timely availability of day-old-chicks at doorsteps of the broiler farms at reasonable year round stable price.
9. Reasonable Price of Feed: To overcome the feed problem, most of the sample traders suggested that the government and non-government organizations should play a significant role in making provision for adequate broiler feed in the country, that the traders could purchase feed at reasonable price. They also suggested for establishing sufficient feed factory in the study area.

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## APPENDIX

**Title: Study on Commercial Broiler and Sonali farming in Raipura, Belabo, Shibpur and Monohordi Upazila**

**Questionnaire**

1. A. Name of the farm.................................................

B. Name of the owner/Farmer/Employee.................

C. Address: Village.........Union...............................

P.O..............Thana.............District…...

D. Farmer’s education..............................................

E. Children number & education.............................

F. Farmer’s economic condition..............................

1. **Husbandry practice:**
   1. Housing: a. Brooder house b. Grower cum finisher house
   2. Feeding:
      * Collection of feed...........................................
      * Storage of feed …..........................................
      * Types of feed...................................................
      * How many times feed supplied daily............?
   3. Watering:
      * Source of water
      * Frequency of water supply

D. Litter materials...................................................

E. Ventilation

a. Sufficient. Insufficient

F. Lighting schedule………………………………

G. Biosecurity.......................................................

H. Foot bath: ……………………………………...

**3. Number of sheds....................................................**

1. **Incidence of diseases……………………………..**
2. **Management of disease condition:**
   1. Self-management
   2. Quack
   3. Veterinary doctor

6. Health programmed:

a. Vaccination

b. Anthelmintic

**7. Mortality rate: .............................................................**

**8. Marketing system:** ………………………………….

**9. Cost & return:** ………………………………………

**10. The farm is profitable or not......................................**

Name of the interviewee............... Name of the interviewer...........

Date............................................... Date: ……………....................

Signature....................................... Signature....................................

**BIOGRAPHY**

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