

**A REPORT ON COMPARATIVE PERFORMANCE OF  
DIFFERENT LAYER STRAIN AVAILABLE AT SHIBPUR  
UPAZILLA AT NARSINGDI**



**A Production report submitted by**

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## ABSTRACT

This study was conducted to know the Comparative performances of different commercial layer strains available at shibpur upazilla, Narsingdi. In shibpur mainly Hy-Line Brown, ISA- brown, Novogen brown and shaver brown -579 strains were reared. During this study total 9780 Hy-line brown in six farms, 5500 ISA Brown strains in 4 farms, 7450 Novogen brown in 6 farms and 6400 shaver brown-579 strains in four farms were studied. All the birds were reared in cage management system. The mature body weight, no. of egg production in total rearing periods, feed conversion ratio(FCR), peak production periods, mortality rate , age of 1st laying, weight at 1st laying, laying periods of four strains in cage management system were studied. The mature body weight of each strain was in (1800-2000gm) range. The number of egg production per bird in total rearing periods (80 - 95 weeks) were  $393\pm 0.21$  of Hy-line brown,  $365\pm 0.26$  of ISA brown,  $381\pm 0.33$  of Novogen brown and  $380\pm 0.41$  of shaver brown -579. Feed conversion ratio was higher in case of ISA brown(2.4:1) and lower in case of other three strains. Peak production periods were higher (30-70) weeks in case of Hy-line brown than other three strains. Mortality rate was lower in Hy-line brown (7.66) and higher in ISA-brown(14%) and shaver brown -579 (13.8%).The age of 1st laying was in average (17-19) weeks for the strains. The weight at 1st laying was likely to close for all the strain(1500-1700gm). The laying periods was higher (70-72) weeks in Hy-line brown and lower(60-65) weeks in ISA- brown. The performance of Hy-line brown was very good than other strain. The performance of ISA-brown was slightly lower.So,the performance of Hy-line brown was better than other three strain and more adaptable in shibpurupazilla, Narsingdi.

# CHAPTER – I

## INTRODUCTION

### **1.1: Background of the study:**

Bangladesh is a densely populated developing country of 147570 sq. km (BBS, 2000) area with about 145.2 million people (GOB, 2010). The economy of Bangladesh mostly depends on agricultural resources. Approximately eighty five percent people of the country rely on agriculture in one way or other for their livelihoods. Livestock is an important sub-sector of Bangladesh's agriculture, of which contribution of poultry has risen significantly. The share of livestock sub-sector to total agricultural GDP has increased from 12.72 percent in 2000-01 to 16.87 percent in 2011-12 in Bangladesh (MoF, 2011). Poultry production and poultry related industry contribute 20.65 percent of the total livestock contribution (Khan and Roy, 2006).

Commercial layer farming is not only a source of employment, income and food but also critical to strong socio-cultural linkage in a country like Bangladesh. The demand for egg is increasing with the rapid increase in population. To fulfill the demand of egg it is essential to increase egg production. Poultry production is affected by such factors as breed and strain of chickens used, environmental conditions in the poultry house, management practices, and feed and feeding management (Bell and Weaver, 2002). Different breeds and strains vary in their genetic makeup. A strain is a group of birds, within a breed, that is selected for specific criteria, such as age at sexual maturity, livability, egg production, or egg quality or a combination of more than one.

Worldwide all commercial poultry strains are being produced by breeding companies. When the industrialization of poultry production started, every

country had numerous small breeding companies, but a huge consolidation took place with the increasing global importance of poultry production. This note focuses on laying hen selection, although in all cases commercial poultry breeding follows the same system: within the company a large number of pure lines are selected for a variety of traits. They consider following traits: the age at sexual maturity, egg production per hen, rate of lay before and after moult, livability in the growing and laying house, egg weight, body weight, feed conversion, shell color, shell strength, albumen height, egg inclusions (blood and meat spots) and temperament, plus traits affecting the productivity of the parent. Since the early 1980, the increasing proportion of eggs broken out for further processing has added additional traits, including percentage solids and lipids in the egg (Preisinger and Flock, 1998).

Egg production per hen housed will continue to be the single most important trait under selection.

As flocks maintain high rates of lay for longer periods of time, they can be kept to advanced ages without being moulted (Ottinger,1992). It can be expected that breeders will continue to work for improved post-moult performance for the foreseeable future. To measure the genetic potential of hens, data on individual egg production are required which is quite easy when hens are kept in (individual) cages. Accuracy of recording is the key in successful breeding programs. Currently, breeding companies are mainly making use of group selection; the so-called Recurrent Testing and Reciprocal Recurrent Testing (select the pure lines on the performance of their cross bred progeny), to select the modern breeds for livability, less pecking and social interaction in the field. These pure lines are crossed in specific combinations to deliver the parents of commercial laying hens. A commercial hen is thus a so called 4-way cross. Due to the crossing scheme different capabilities can be combined. And there is a clear, positive effect of heterosis, e.g. the fact that a hybrid or cross is superior to both parental lines.

Although there is no public or recent information on the comparison of pure line versus cross line birds performance available, from the theory and the experimental comparisons of over 50 years ago it still can be assumed that cross line hens perform 10 to 40 percent better than pure line hens. The biggest improvements can be seen in the low heritable traits, like livability and reproductive traits.

The different strains vary in the different criteria of egg production and quality (Moreng and

Avens 1985; American Poultry Association 1985; Crawford, 1990; North and Bell, 1990; American Poultry Association 2001; Bell and Weaver, 2002). In addition, the stress response to handling is grater in white leghorn than that in brown leghorn (Fraisse and Cckrem 2006). In Bangladesh most common layer strains are ISA Brown, White leghorn, Hy-Line white, Hy-Line Brown, Hy-Sex White, Hy-Sex Brown, Sonali etc. Among them few are white shell producer and few are brown shell producer. The brown strains were developed because there was an apparent demand for consumption of brown eggs. In addition, there was apparent problem with shell quality in white eggs. Egg production and quality differ between different white and brown egg strains. Hy-Line-W36, Hy-line-W-98, Bovans (white), DeKalb (white) and DeKalb (sigma) are produce white eggs, and Hy-Line (Brown), Bovans (Brown) and DeKalb (Brown) are produce brown eggs. The average age at sexual maturity for the brown hens is 132.7 days, which was shorter than that of white hens (137.8 days). The overall average of hen day egg production for the brown hens is 85.6 percent, which is higher than that of white hens 83.2 percent (Anderson, 2002). It is important to emphasize that any improvement in egg production of laying hens would be translated to economic benefits to the company.

A good commercial layer management is required for the optimum growth and subsequently high egg production (Samad, 2013). About 75 percent of all the commercial layers on the world are now kept on cage (North, 1984). The egg production is the major index of performance of commercial layer business, because of its account for 90 percent of the income from the enterprise (Oluyemi and Robert, 1979). The egg production of the commercial layer commences about 19" weeks of age, rises sharply to a peak at about 26 to 27" weeks of age and then declines gradually. It is a usual practice to replace the layers at age 72 to 76 weeks (Rahman, 2003).

Age at sexual maturity is important trait from the economic standpoint. The age in days laying commences is important not only with respect to its bearing on total first year lay but also because the earlier life that a pullet commences laying the sooner she produces revenue. Age and weight at sexual maturity are influenced by feed intake, lighting, increase and decrease of daylight and environmental factor (Morris and Fox, 1960).

To meet the demand we need mass production of chicken egg through intensive farming system with high yielding poultry breed or strain. The growth and automation of the commercial egg manufacturing industry have developed faster and progressed further than any other type of livestock production during a period of only about last two decades in Bangladesh. Keeping all points in mind the study was designed to fulfill the following

### **1.1: Objectives of the study:**

- (i) To study the comparative productive and re-productive performance of different layer strains available in shibpurupazilla, Narsingd.
- (ii) Identifying major problems and their remedial measures of rearing different layer strains.

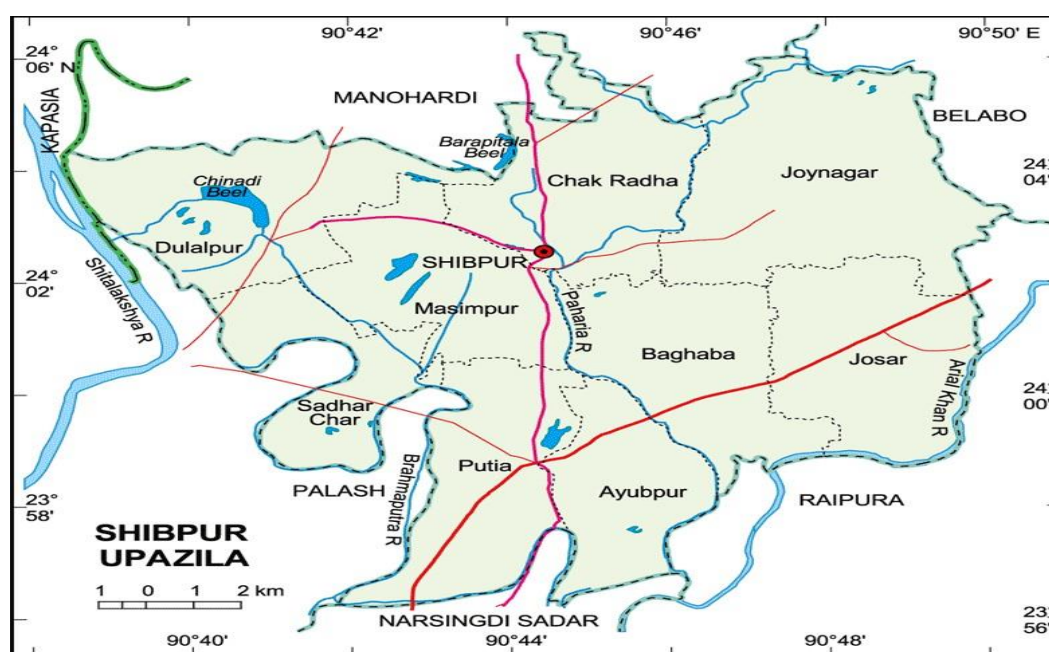


## CHAPTER –II

### MATERIALS AND METHODS

#### 2.1: Study area:

The study area was Shibpur, Narsingdi. The Study area is situated at Narsingdi, Dhaka, Bangladesh. The geographical location of shibpur upazilla is given below:



**Fig:** Geographical location of shibpurupazilla, Narsingdi.

#### 2.2: Study period:

The study was conducted From December 2019 to February 2020.

#### 2.3: Procedure of data collection:

During data collection, the farms were visited and meet with the owner of the farm to collect data properly. the data was collected by visiting 20 farms in my

study area. The data was collected from the owner of the farms by using questionnaire. Among the 20 farms, Four layer strain found which are available in my study area. These four strains are Hy-line brown, ISA-brown, Novogen brown, Shaver brown -579. The data is collected properly on the basis of my parameters.

The data was collected under two parameter. Under these parameters, the following data were collected.

A.On production performance

- Strain name
- No. of observation
- Mature body weight
- Feed Conversion Ratio(FCR)
- Peak production periods
- Mortality

B.On Reproductive performance

- Strain name
- No. of observation
- Age at 1st laying
- Body weight at 1st laying
- Laying periods

Vaccination means injecting the bird with infectious organism with mild or no activity,therefore when administered produce, or artificially increase, immunity (resistance) against a particular disease.

**2.4: Importance of vaccination:**

- Vaccination is the most practical means of protecting the birds against viral diseases, as there is no treatment for a viral disease.

- Vaccination can help in preventing the disease but it is not a direct replacement for good biosecurity. Vaccination must always be complemented with good biosecurity practices.

### **2.5: Safety tips for poultry vaccines:**

1. Check the source, quality, expiry date and temperature of vaccine before procuring.
2. Ensure to maintain the cold chain of the vaccine all the time right from the procurement until injecting into birds. During transportation of vaccines, the vials can be placed in an insulated flask or thermal box filled with ice packs or ice.
3. Vaccines should be obtained directly from the manufacturers or reputed dealers. Always store vaccines at 4~8 °C in the refrigerator but not in the upper freezer cabinet.
4. Keep all the records regarding the batch/lot and serial number and the date of production and expiry of vaccine to be used. It is better to place the entire label of vaccine vial or vaccination record.
5. Vaccines will come with diluents and droppers; hence it is always advised to use large capacity boxes or flasks for transportation.

### **2.6: While vaccinating the birds:**

1. The ultimate success of vaccination depends on the way the vaccine is administered.  
Hence it is always advised to vaccinate the birds with trained personnel only.
2. Check the flock for signs of coccidiosis, or other diseases, that may interfere with vaccination.
3. Vaccinate only healthy birds. Birds tend to look dull with closed eyes, head down and off feed must not be vaccinated.

4. Handle birds carefully while administering vaccines individually to each bird. S. Follow the manufacturer's procedures strictly for vaccination.
6. Vaccinate only the desired number of birds from a vial. ..
7. Always provide poultry with multivitamin supplements to reduce the vaccination stress and immune stimulants to boost vaccinal immunity at least two days before and after' vaccination.
8. Vaccinate the birds during cooler parts of the day preferably in the early morning.
9. Do not use any chemical for sterilization, such as dettol, savlon soap etc. since this reduces the efficiency of vaccine. For clean vaccination, it is advised to LIsegloves.
10. Do not use unclean and contaminated droppers, syringes, needle.

### **2.7: Vaccination methods:**

1. There are two types of vaccines to be used generally in poultry, live and Killed. Live vaccines for a particular disease must always be applied before killed vaccines are administered so as to have better protection.
2. live vaccines must be given either through oral route, nasal route, as an eye drop or spray.
3. Killed vaccines must be given inform of injection either subcutaneously or intramuscularly by using a syringe with a 22 gauge needle.
4. Injection sites for subcutaneous are back of the neck and wing, while common sites for intramuscular route are breast and thigh muscles.

**2.8: Vaccination schedule for layer birds:**

<b>Time</b>	<b>Disease/type of work</b>	<b>Route</b>
1-3 days	ND	Eye drop
8 days	ND+IB	S/C
10 days	IBD	Mouth drop
17 days	IBD	Mouth drop
21 days	ND	Eye drop
35 days	Fowl pox	wing web
52 days	ND killed	Drinking water
60 days	Coryza	Breast muscle
16 weeks	Coryza(booster)	Breast muscle
17 weeks	ND+IB after 12 hours ND+IB+EDS	first drinking water then injection in I/M
After every 35-40 days	ND	Drinking water

## **CHAPTER-III**

### **RESULTS AND DISCUSSION**

#### **3.1: Productive and Reproductive performances of different Layer strains:**

The study was conducted on commercial layer farms in shibpurupazilla, Narsingdi. In shibpur mainly Hy-line brown, ISA-brown, Novogen brown and shaver brown -579 strains of layer are reared. During this study total 20 farms were visited in my study area. The layer strain Hy-line brown found in six different farms. The total birds were 9780 in six farms. ISA-brown strain found in four different farms. The total birds were 5500 in four farms. The layer strain Novogen brown and shaver brown -579 were found in six and four different farms. The total numbers of birds were 7450 and 6400 in different farms. The performance was variable in case of each different farm on the basis of layer strain. The performance was observed on the basis of Productive and Reproductive parameters of different layer strains. Two tables are drawn for the productive and Reproductive performance of different layer strains:

Strain Name	No. of observation	Mature body weight		No. of egg production/bird/ total rearing periods		Feed conversion ratio(FCR)		peak production periods (weeks)		No. of birds died(mortality)
		Standard	Original	Standard	Original	Standard	Original	Standard	Original	
HY-line brown	9780 (6 farms)	(1800-2000)gm	(2000-2200)gm	350-360	393±0.21	2:1	2.3:1	30-50	30-70	749 (7.66%)
ISA-Brown	5500 (4 farms)	(1600-1800)gm	(1800-2000)gm	350-360	365±0.26	2:1	2.4:1	30-50	30-65	779 (14%)
Novogen brown	7450 (6 farms)	(1800-2000)gm	(2000-2200)gm	350-360	381±0.33	2:1	2.3:1	30-50	30-65	745 (10%)
shaver brown-579	6400 (4 farms)	(1800-2000)gmy	(1800-2000)gm	350-360	380±0.41	2:1	2.3:1	30-50	30-65	883 (13.8%)

**Table-1 : Productive performance of different layer strains:**

In the table number (01), productive performance of layer strain was observed. The total 9780 birds of Hy-line brown strain were observed during the data collection. Here, The mature body weight of birds 2000-2200 gm found which is slightly higher than standard value (1800-2000 gm). The finding results is higher than the recommended level of Hy-Line International LTD 1820 - 1940gm. The number of egg production in total rearing periods(80-95wks) are 393±0.21 that is higher than the standard level of egg production(350-360). That is very significant. The feed conversation ratio was 2.3:1 which is slightly higher than the standard level (2:1). The peak production periods were (30 -70)wks that is higher than the standard level (30-50) wks and very significant. In case of Hy-line Brown layer strain the age of peak production found which was higher than the recommended level of Hy-Line International LTD (Hy-Line Brown, 2015). Total 749 birds were died among 9780 birds. The mortality rate was 7.66% which was

slightly higher than the level of Hy-Line International LTD 6.6 percent (Hy-Line Brown, 2015). The total 5500 birds of ISA brown was observed. The mature body weight (1800-2000gm) was found that is higher than the standard level (1600-1800gm). This mature body weight was similar to the level of Hendrix Genetic LTD (ISA Brown, 2006). The total egg production of ISA-brown was (365±0.26) in total rearing periods (80-95wks) that was close to the standard level (350-360). The feed conversion ratio was 2.4:1 that is higher than the standard level. That is significant. The peak production periods were (35-65 wks) that is higher than the standard level (30-50 wks).

The peak production periods were higher than the level of Hendrix Genetic LTD (ISA Brown, 2006). Mortality rate of ISA Brown layer strains was 14 (%) which was higher than the level of Hendrix Genetic LTD 6.8 percent (ISA Brown, 2006). Now Novogen brown, The mature body weight was (2000-2000gm) that was higher than the standard level (1800-2000gm). The findings was higher than the level of (Islam et al. 2013) (1825-1900) gm level. The total number of egg production was 381±33 in total rearing periods (80-95wks) that is higher than the standard level (350-360). That is significant. The feed conversion ratio was 2.3:1. The mortality rate 10% that is higher than the level of 7.6 percent. Now, shaver brown- 579 that was also reared morely in my study area. Here, The mature body weight was (1800-2000) gm that is more or less similar to the standard level. The finding was higher than the level of (Islam et. Al, 2013) (1830-1900) gm. The total number of egg production was 380±0.41 in total rearing periods that was higher than the standard level (350-360). That is significant. The feed conversion ratio is 2.3:1. The peak production periods were (30-65) wks that was higher that standard level (30-50) wks. The findings was higher than the level of (Islam et.al. 2013). The mortality rate was 13.8(%) that was higher than the level of (Islam et



al. 2013) 7.8 percent. The production performance of four strain found in my study area is given upon with results and discussion.

**Table- 02: Reproductive performance of layer strain.**

Strain Name	No. of observation	Age at 1st laying(weeks)		Weight at 1st laying		Total laying periods (weeks)	
		Standard	Original	Standard	Original	Standard	Original
Hy-line brown	9780 (6 farms)	18-20	17-18	(1500-1600)gm	(1600-1700)gm	50-60	70-72
ISA-brown	5500 (4 farms)	18-20	18-19	(1500-1600)gm	(1500-1600)gm	50-60	60-65
Novogen brown	7450 (6 farms)	18-20	18-19	(1500-1600)gm	(1600-1700)gm	50-60	65-70
Shaver brown-579	6400 (4 farms)	18-20	18-19	(1500-1600)gm	(1600-1700)gm	50-60	65-70

In table number (02), Reproductive performance of layer was observed. At first Hy-line brown, here the performance was very good in my study area. Hy-line brown are reared more in my study area. The age of 1st laying was started from (17-18) wks that was very early laying time and in range to the standard level (18-20) wks. The age of 1st laying time of Hy- line brown was similar to the level of Hy-Line International LTD 18 weeks (Hy-Line Brown, 2015).The body weight at 1st laying time was( 1600-1700) gm that was higher than the Standard level (15001600)gm. In case of Hy-Line Brown layer strain body weight at 1<sup>st</sup> laying was found that was higher than the level of International LTD (Hy-Line Brown, 2015).The total laying periods were (70-72) wks that was higher than the standard level (30-50) wks. The Laying periods were very high in case of this strain. This is very beneficial to the owner of the farm. The total laying periods

that was found higher than the level of International LTD (Hy-line brown, 2015) 26-42 wks. Now, ISA- brown strain of layer that was also available in my study area. The age of 1st laying was started from (18-19) wks that is closely related to the standard level (18-20) wks. The age of 1st laying was similar to the level of Hendrix Genetic LTD (ISA Brown, 2006). The weight at 1st laying was found (1500-1600)gm that is similar to the standard level. The findings that was found is similar to the level of Hendrix Genetic LTD (ISA Brown,2006).The total rearing period was (60-65)wks that was close to the standard level. The laying period was higher than the level of Hendrix Genetic LTD (ISA Brown, 2006).Now, Novogen brown strain that was also reared more in my study area. The performance was also very good. The age of 1st laying was started from (18-19) wks that was similar to the standard level. The age of 1st laying was similar to the level of (Islam et. al.2013) 19 wks. The weight at 1st laying time was 1600-1700 gm that is higher than the standard level. The findings were higher than the level of (Islam et. al.2013) 1400-1500 gm. The total laying Period was ( 65-70 ) wks that is higher than the standard level. The laying periods was higher than the level of ( Islam et.al.2013). Now, The strain shaver brown-579 was observed in four farms in my study area. The age of 1st laying was started from (18-19) wks that is similar to the standard level. The age of laying was related to the level of (Islam et. al.2013) 19 wks. The performance was also very good here. The weight at 1st laying of this strain was (1600-1700)gm that is higher than standard level. The weight at 1st laying was higher than the level of (Islam et.al 2013).The total rearing period was (65-70) wks in case of shaver brown-579. The laying periods was higher than the level of (Islam et.al.2013) (2645) wks. The overall reproductive performance was good and significant in the field level. From the two (01&02) table, The performance of four strain ( Hy-line brown, ISA-brown, Novogenbrown& shaver brown-579) of layer observed in the study. The productive and reproductive performances of layer strains were observed.

The overall performance was very good. The performance of Hy-line brown was very good than other strain. The performance of ISA-brown was less than other strain that was conducted in the study. In this study all the findings were not same with the recommended level. The findings were variable according to the strain. This may occur due to differences in environmental condition, management system, lighting system, feeding, medication etc. The comparative performance of different layer strain has been described above properly. Further study will help to know the performance of different strain in this study area.

### **3.2: Major problems and remedial measures associated with layer farming practices:**

#### **General Challenges -**

In the country the epidemic of some infections coupled with increase in feed cost sometimes emerge to be the most significant hinders for this industry.

-Recently NBR is trying to impose new taxes on maize import. This has created problem as maize is the key ingredient to prepare poultry feed.

-Industry Competitors like other livestock's and fishes

-New entrants like meat from cow, fish or new foods

-Substitutes like meat from alternative sources and eggs of other birds or change of food habit

-Suppliers like farmers and supply chain management from remote areas to urban areas should develop

-Buyers like individuals, Hotels, Restaurants, fast food shops etc.

- Moreover, the tax exemption on poultry will also come to an end by June 2011 which increased up to 2013.

- The price of poultry raw materials has hiked up sharply in the international market. Very naturally the production costs have also hiked up.

- The banks interest rate in this sector is very high which is on an average 12-14% per annum and real effective interest rate is around 18-20% per annum. Moreover, lot of hidden charges and costs are associated in this sector to avail the loan from

the banking sector. Actually bank interest rate should be 10%. Moreover, NGOs and also Grameen bank should play more active role to lower the interest rate for poultry sector under their social business program so that rural people can be motivated.

- Cost push inflation and demand pull inflation both are presently prevailing in the country. As a result purchasing powers of the people are declining. According to Economic Trends (2011) annual rate of inflation increased to 9.43 percent at the end of the August 2011 from 7.87 percent at the end of August 2010. - This sector faces the problem of load shedding.

### **Avian Influenza outbreak:**

A threat for poultry growth - Currently the country has been affected by Avian Influenza and as a resultant factor suffered losses around BDT 700 core taka (as per Breeder's Association of Bangladesh). This is a huge losses for the producers and they did not get any sort of financial help to mitigate this huge losses - As per FAO report (20 April, 2011), Bangladesh and other five countries India, China, Egypt, Indonesia and Vietnam has been suffering from the H5N1 virus. This is because of 'firmly entrenched' due largely to 'weak producer and service associations' to support farmers. In aforesaid countries avian flu is still endemic due to poor veterinary and livestock production services retard appropriate revealing and managing of infection. Due to bird flu we can not know export chicken in Nepal and also Middle East countries. As such negative impact has been felt. - In this context, expansion of veterinary services including vaccination is essential. - Need for country's strategy, long-term planning and its effective implementation to feed the population of the country as well as export in abroad to be added by 2021. Currently eggs and chickens are distributing through middlemen, as a result: - The farmers are not getting actual price. Since the last 6-7 months they are counting huge losses, as the production cost is high and selling price is low. - Therefore the actual producers won't get any benefit of the high price as they are oppressed by the middle men who suck the profit. - Lack of modern management of poultry farming is also creating negative impact. - Moreover, the end users i.e. customer has to pay higher price.

## **Remedial measures:**

Following recommendations may be considered to sustain the poultry industry of the country:

- To mitigate food deficit especially protein related food, the poultry sector needs special attention for which Public and private collaboration is essential.
- To fulfill the dream of present Govt.'s Vision 2021, poultry sector can act as an auxiliary force to arranging food at cheaper rate. As such tax exemption can be extended for the period of 2025.
- Imposition of tax on import of maize ought to be withdrawn urgently as producers of the poultry sector specially small farmers are facing
- Bank loan in the poultry sector should be arranged at a 5-7% simple interest rate per annum considering thrust sector. Conditions of loan providing should be eased. Moreover, Bank should come forward so that new entrepreneurs as well as NRBs can come forward to invest in this sector through opening special window in each bank arranging not only bank loan but also offering special services starting from pure line farms and Hatcheries to Consumers. Banks who won't be interested to invest in the poultry sector may be penalized by the Bangladesh Bank. This industry also treated under SME sector.
- Livestock department should be more effective and efficient. Proper human resource management and staffing as well as extension of the livestock office is required. They should play proactive role. As such livestock institutes at Sylhet and Gaibandhya should be effective and regional research centers should be more active.
- To face the global warming problem, this sector should get more priority so that they can be able to cater the demand of the food deficit.
- The price of chicken and egg, if fixed, should not for only some months but whole year considering the production cost so that producer deficit not occurs.

## **CHAPTER-IV**

### **CONCLUSION**

Recent livestock in Bangladesh have found in poultry production as a tool in poverty alleviation. Now a days, people of rural area are rearing poultry to overcome their poverty. It is so much beneficial for them. Cost of rearing poultry is minimum and benefit is maximum. That's why people are more interested to rear poultry birds. At present, educated persons are also rearing poultry. People can income money in a short period by rearing poultry. Poultry industry is very important for our country to eradicate poverty. At that time, poultry is a highly rising industry in our country. But, Most of the farmers do not follow the standard. At present, most of people do not follow proper management system. For this reason many dangerous disease are found in many area of our country. Necessary step should be taken to ensure proper management system in every farms. Only few, which rear poultry at a large or medium scale, try to maintain standard. The objectives of the present study are to study the comparative performance of different layer strains in Shibpurupazilla. The level of egg production is higher in Hy-line brown strain than other strain. The feed consumption per day was nearly similar. But mortality rate is variable. Finally it is concluded that Hy-line brown layer strain is more adaptable and profitable in Shibpurupazilla than other strain which are discussed above. Further study needed for the development of poultry business in shibpurupazilla, Narsingdi.

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# APPENDIX

## Brief Questionnaires for the study

1. Strain Name: .....
2. Total no. of layer birds: .....
3. Age at 1st laying time: .....
4. Weight at 1st laying time :.....
5. Mature body weight : .....
6. Total no. of egg per bird in total rearing periods: .....
7. Feed Conversion ratio(FCR):.....
8. Peak production periods: .....
9. Total Laying periods : .....
10. Mortality Rate: .....
11. Major problems:-----
12. Remedial measures:-----

## PHOTO GALARY



**Pictures:** During data collection