

# **Poultry Industry in Bangladesh: Present Status and Future Potential**

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## **ABSTRACT**

The present study is an attempt to examine the present situation of Bangladesh poultry industry and its future potential. In Bangladesh commercial poultry production has been growing rapidly since the early 1990 by using improved genetics, manufactured feeds and management. This improvement is done mainly in the private sector as a device for additional source of income and employment opportunities particularly in rural area. This dramatic growth of poultry farms throughout the country without judging feasibility of the farm in the area. This process has been influenced by the programmes of different NGOs and the public sector. The poultry sector of the country is classified neither as an agricultural sector nor an industrial sector, receives far less support than its potential contribution might indicate. Based on this poultry industry a number of industries are developed both in inputs sector and outputs sector along with a number of service providing organizations where at least 60 lakh people are involved. The poultry industry was hit by bird flu in 2007 and 2009. The number of firms reduced to 55,000 in 2013 from 1,15,000 in 2007. Another source reported that there are about 65,902 poultry farms upto February 1013 in the country (BER,2013p.104). In spite of decrease in number of poultry farms, it is reported by Bangladesh Poultry Association that that the country achieved self sufficiency in production of chicken meat and eggs. So the problem is excess supply of chicken meat and egg in the market.. The major challenges to poultry sector are limited access to credit, competition from import and outbreak of diseases like Avian Influenza. In addition there are other problems which hinder the proper development of poultry industry. Production of quality and safe product in compliance with international standard of hygiene, sanitation and phytosanitary is an important issue. For sustainable development of poultry sector some specific recommendations (establishment of effective data bank, formation of poultry farmers' organization etc) are made for consideration by the concerned stakeholders of this industry.

## **Introduction**

Commercial poultry production has been growing rapidly in Bangladesh since early 1990 by using improved genetics, manufactured feeds and management. This dramatic growth of poultry farms throughout the country has taken place without judging feasibility of the farm in the area. This improvement is done mainly in the private sector as a device for additional source of income and employment opportunities particularly in rural area. This process has been influenced by the programmes of different NGOs and the public sector. Background of poultry industry in Bangladesh may be seen in Raha (2013).

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Poultry refers to domestic birds that produce eggs, meat, manure and feathers that can be used or treated by their owners. But in this paper only chicken is considered. Two types of chicken have been reared, one for egg and another for meat. In general, poultry provide animal protein in the form of meat and eggs.

Indigenous chicken is widely reared throughout the country by rural people since time immemorial. Village poultry is still popular to millions, eight thousand years after domestication (Alders and Pym, 2009) and play a vital role to poor rural households. Indigenous chicken are free range 'backyard' and scavenging poultry that are traditionally reared by the rural women. The share of commercial strain of chicken and family poultry was 50:50 in egg production while for meat production it was 60:40 in Bangladesh (Bhuiyan,2011) .

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. Sonali requires less care and attention so women and children can easily rear it. Sonali rearing is easier than broiler due to suitable environment of the country ( Saleque and Saha, 2013).Sonali comprised about 30% of the total broiler and layer production in the country ( Huque et, al, 2011).Traders use to sell Sonali in the name of local chicken at a higher price. Poultry industry contributes 1 per cent to the country's GDP while at least 60 lakh people are involved in the sector, but the industry lacks proper support from the government.

#### **Data source:**

The paper is mainly based on secondary data, published journal, newspaper, magazines, unpublished documents and consultation with some knowledgeable persons in poultry sector. Information on various aspects of poultry industry varies with variation of sources. The foreign firms have been investing in poultry sector in Bangladesh. According to Bangladesh Poultry Association the growth domestic of consumption would not be sufficient to absorb domestic supply. It is reported that the country achieved self sufficiency in production of chicken meat and eggs. So the problem is excess supply of chicken meat and egg in the market. There is a growing concern that excess production of chicken meat and eggs leads to close down of poultry farms in the country (Shahin, 2014).

#### **Present position**

As we know poultry industry includes both the layer farms and broiler farms in the country. Large numbers of farms in different sizes are operating all over the country. The poultry industry was hit by bird flu in 2007, 2009 and 2011. The number of firms reduced to 55,000 in 2013 from 1,15,000 in 2007 due to outbreak of diseases along with other problems. Another source reported that there are about 65,902 poultry farms upto February 1013 in the country (BER,2013p.104). In two years since 2011, nearly 25,000 farms were closed mainly due to the outbreak of the diseases (Daily Star, 2013).

There are 6 Grand Parent farms which supply 80% of the total demand for parent stock and rest 20% are imported. In the country 82 parent stock farms are operating and of producing 55-60 lakh DOC of broiler and 5 lakh Layer DOC per week.(Estimated by Breeder Association). Table 1 reveals that the highest consumption of egg per head per year was highest (48 ) in 2012 that means 53.85% are deficit as compared to minimum requirement of 104 eggs per head per year.Net availability and per capita consumption of chicken meat and eggs have been increasing from 1995-96 to 2012-2013. The fall in consumption and availability during 2006-07 to 2008-09 could be attributed to outbreak of avian influenza in the country.

Table 1. Availability and consumption of meat and eggs in the country

Year	Population estimated (Million)	Net availability of meat ( ‘000 M.ton)	Per capita consumption of meat (kg.)	Net availability of eggs(Million number)	Per capita consumption of eggs(No.)
1995-96	122.1	449	3.7	2564	21
1996-97	124.3	624	5.0	3470	27.9
1997-98	126.5	639	5.1	3691	29
1998-99	128.2	656	5.1	3926	31
1999-00	129.8	673	5.2	4177	32
2000-01	129.9	693	5.3	4446	34
2001-02	131.6	867	6.7	4446	33.8
2002-03	133.4	935.6	6.9	7026.0	52.0
2003-04	135.2	1020.2	7.4	8037.9	58.7
2004-05	137.0	1166.1	8.5	8037.9	58.6
2005-06	138.8	1130	8.14	5422	39.06
2006-07	140.6	1040	7.39	5369	38.18
2007-08	142.4	1040	7.30	5653.2	39.69
2008-09	144.2	1084	7.52	4692	32.53
2009-10	146.1	1264	8.65	5742.4	39.30
2010-11	149.7	1279	8.54	4211	28.12
2011-12	151.6	2332	15.38	7303.8	48.17
2012-13*	153.6	2532	16.48	5134.7	33.42

Note:2012-13\* Figures except population refer upto February 2013.

Source: 1995-96 to 1998-99 Statistical pocketbook of Bangladesh 2000,p.389

1999-00 Statistical pocketbook of Bangladesh 2003 p.403

2000-01 to 2003-04 Statistical pocketbook of Bangladesh 2005, p.415

2004-05 Statistical pocketbook of Bangladesh 2012,p.417

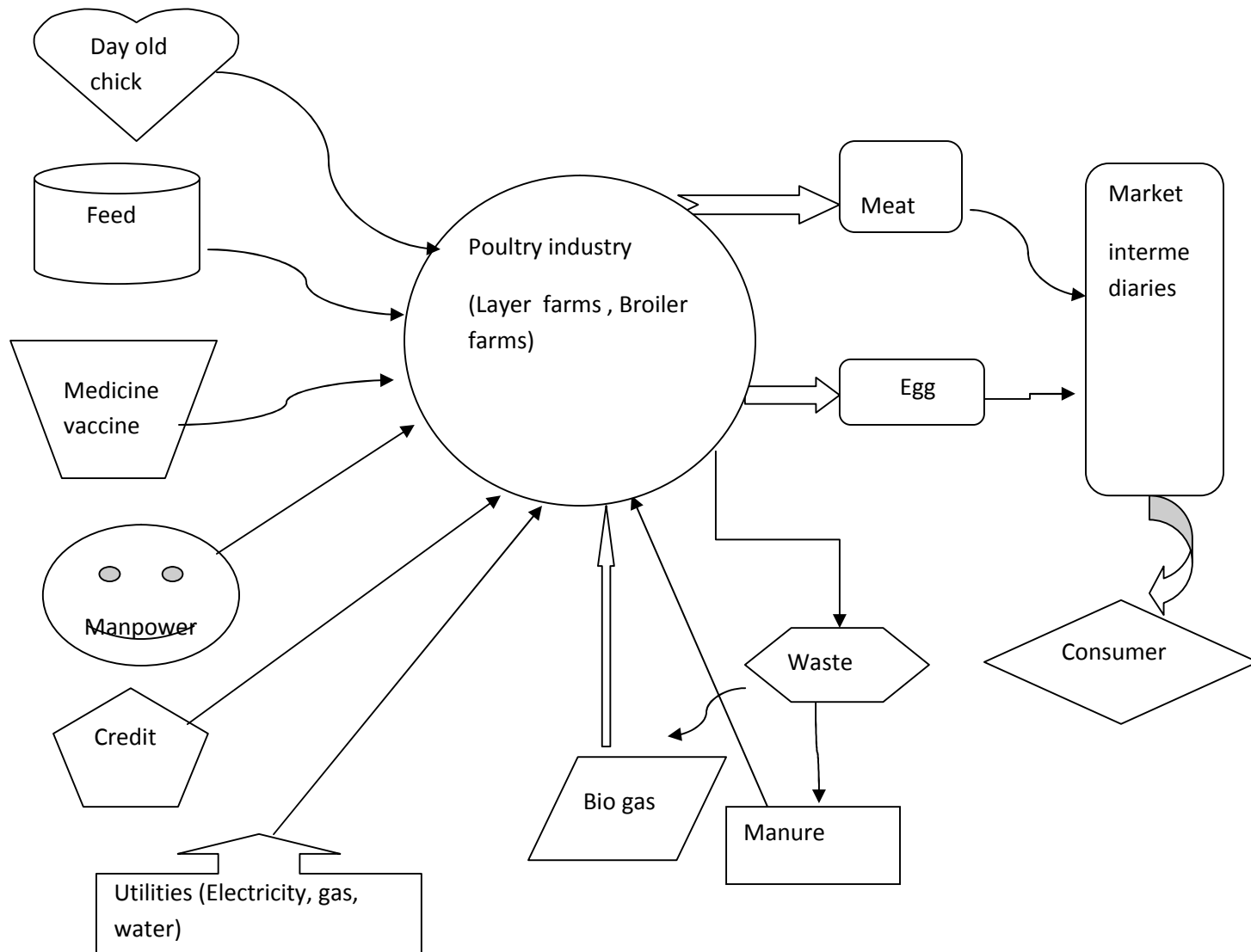
Population from 2001-02 to 2012-13 Bangladesh Economic Survey 2013, p.303

Meat and egg from 2001-02 to 2012-2012-13 Bangladesh Economic Survey 2013,p.103

## Contribution to society

Based on this poultry industry a number of industries are developed both in inputs sector and outputs sector along with a number of service providing organizations (Fig.1).

Poultry industry contributes 1 per cent to the country's GDP while at least 60 lakh people are involved in the sector, but the industry lacks proper support from the government as claimed by stakeholders.



**Fig 1. Poultry industry along with its input and output sectors**

But an opposite picture is seen in Table 2. Actual production and the expected demand for poultry products are shown in Table 2. Table shows that production of chicken meat, egg and live chicken are larger than those of demand.

Table 2. Current demand and production of poultry and poultry products

Particulars	Production	Demand	Excess
Poultry meat (tons)/day	1500	1400	100
Eggs (crore)/day	1.6	1.5	0.1
Chicken (lakh piece) /week	95	85	1.0

Source: Bangladesh Poultry Association as cited by Moazzem and Raz 2014

Table 2 indicates that the country has achieved self-sufficiency in production of poultry products but the local poultry farmers are now facing losses due to lack of coordination between demand and supply (Round table conference, July 9 2014 Tribune 10 July 2014). It was highlighted that the farmers are incurring losses over few months due to excess production of chicken and egg. Excess production of chicken meat is forecasted by Business Monitor International which is presented in Table 3.

Table 3. Forecasts of production and consumption of chicken in Bangladesh

Year	Chicken meat lakh ton		
	Production	Consumption,	Excess
2012	1.98	1.39	0.59
2013	2.04	1.44	0.60
2014	2.10	1.50	0.60
2015	2.18	1.57	0.61
2016	2.25	1.64	0.61
2017	2.32	1.71	0.61

Source: BMI forecasts, 2013

### **What are the reasons for excess production of chicken meat?**

It is very important to note that although two-thirds of poultry farms are closed but the total production has increased rapidly. This could be due to increase production by large farms. It is also reported that the foreign entrepreneurs have doubled their farm production. But the demand has not increased rapidly so it creates a situation of excess supply of poultry products as compared to demand in the market. The excess production leads to lower price in the market. This does not cover even production cost. The leaders of this sector explained the excess production due to unplanned investment and expansion by the local entrepreneurs.

## **Market potential**

**Market potentiality exists for both in domestic and export markets which is briefly explained below.**

### **Prospect in domestic market**

According to WHO – FAO joint survey, meat consumption per head in Bangladesh is 15.23 kg per year while the requirement is 43.8 kg per person. So there is a deficit of 65.23 % to meet our domestic requirement. It may be noted that poultry contributes 35.25% of total meat supply (Akbar et.al 2013,p.27). On an average people consume 3.63 kg of poultry meat per year which is expected to be 5 kg by 2015 and 12 kg by 2021 (according to Poultry Association).

So there is scope to increase chicken production by three times to meet the domestic requirement. Similarly, egg production can be increased by 61% for attaining minimum requirement of egg in the country. The per capita availability of egg is 41 per year while the requirement is 104 i.e. 60.58% of deficit.

### **Export potentiality**

Poultry industry has the potentials to export to India, Pakistan, Nepal, Malaysia, Indonesia and countries of Middle East. The consumption of meat in developing countries grew by 70 MMT from 26 MMT during last five years (Financial Express, 2014). This increasing trend will continue due to increase in population, higher income and health consciousness of the people.

### **What to do for harvesting market potential**

A major problem in meeting nutritional requirement is lack of purchasing power of the consumers in the country. Undertaking Programmes to enhance purchasing power of the people through creation of productive activities is an important measure.

Steps should be adopted to produce quality and safe food for both the domestic and export markets.

To survive in the business a competitive environment is important which would ensure supply of all inputs at competitive price and also ensure remunerative price of poultry and its products for the producers.

To enter the foreign market, the entrepreneurs should acquire competence in production of safe and quality products at competitive price. They should adopt Hazard Analysis and Critical Control Point (HACCP) system to ensure production of safe and quality product. They should also comply with food hygiene and trade regulations.

We need to enforce sanitary and phytosanitary measures based on standards, guidelines and recommendations of Codex Alimentarius Commission, the International Animal health Organization (OIE).

### **Consumers' attitude toward indigenous chicken and broiler**

There is an idea among a group of consumers that indigenous chicken is better than broilers in terms of taste and quality of meat. For this consumers' preference indigenous chicken are sold at much higher price than the broiler. In the market traders use to sell 'Sonali' in the name of indigenous chicken as the phenotypic appearance of 'Sonali' is similar to indigenous chicken. The marketer should make this point clear to consumers.

### **Misconception about egg**

#### **Are Brown Eggs Healthier Than White Eggs?**

There is no difference in nutrient contents between brown and white –shelled eggs. But consumers prefer brown-shelled eggs to white shelled eggs considering more nutritious. So price of brown-shelled egg is higher than that of white-shelled egg in the market. Secondly, brown feather chicken lay brown eggs, they are larger in size than white ones, so they eat more food, which in turn costs farmers more. And it is the consumer who pays for that. The selection of commercial white layer and brown layer should be based on their comparative advantage as feed intake of brown layer is higher and slight price advantage for brown eggs but no difference in quality.

#### **Eggs from local poultry vs farm eggs**

In the market eggs of indigenous chicken fetch higher price per unit than the farm supplied eggs as a segment of consumers consider *Deshi* egg as more tasty and nutritious. But there is no scientific support on this point. Size and type of eggs have no different impact on the taste. But volume of nutrient contents will vary with size.

#### **Colour of egg yolk**

Some consumers believe that deep yolk colour is the sign of more tasty and nutritious than the pale yolk colour. Presence of xanthophylls pigment in feed is responsible for yellow colour of egg yolk (Akter *et al.*,2011). Now synthetic xanthophylls is available in the market for yolk colouration.

#### **Organic eggs are more nutritious than regular eggs**

Organic eggs are produced by hens using organic feed, free from antibiotic, growth hormones and enzymes. If the organic feed is not well balanced as the commercial layer feed, then the nutritive value of organic eggs tends to be lower than the regular eggs(Watkins, 1994). Organic

feed is expensive than commercial feed and production of organic eggs is lower thus organic eggs are sold at higher price compared to regular eggs (Das *et al.*,2014).

### **Consumption of eggs and heart disease**

There is a tendency to avoid use of egg as it may cause cardiovascular/heart disease. But in fact, fat in egg yolk is mostly composed of unsaturated fatty acid, which may have very little effects on blood cholesterol levels. Research findings support that daily egg consumption has a very limited effect on total cholesterol in healthy individuals (Ohman *et al.*, 2008).

### **Removal of misconception**

Misconception about egg are age old but not based on scientific reasoning, these are either due to ignorance or mere taboos. By removing these misconceptions from the people through market development tools (Kohls and Uhl 2005) will generate a good market for poultry egg and meat in the country. Market development activities should be launched by the members of the poultry industry. Government support will accelerate the programmes.

### **Challenges**

The major challenges to poultry sector are limited access to credit, competition from foreign firms and outbreak of diseases like Avian Influenza. The foreign firms have been investing in poultry sector in Bangladesh. They are borrowing money from their banks at a cheaper rate of interest i.e.4%. But the local entrepreneurs borrow funds with the rate of 15-to 18%. So the local firms are unable to compete with the foreign firms. (The Daily Financial Express “Let poultry sector stand on its own”, February 14, 2013).

In addition following points need quick attention:

- a) Most of the poultry farmers are young who have started farming without having any prior training and management orientation.
- b) Slaughtering of poultry birds in open space in marketplace is the common practice which may help in outbreak of diseases.
- c) Lack of reliable data in poultry sector and its unplanned growth in the country is a great concern for development of poultry industry in the country.
- d) There is national poultry development policy 2008 in Bangladesh. But the policy has not been implemented in field.
- e) Unorganized poultry farmers at rural area throughout the country.

### **How to face the challenges**

The problem of limited access to credit can be solved through government policy, change in attitudes of the bankers and the poultry entrepreneurs.



Foreign farms are large in size and vertically integrated so the non-integrated local farms will not be able to compete with them. If the expansion of vertically integrated firms continues then ultimately non-integrated small and medium poultry farms will disappear from the market. And its consequences will not be beneficial for the nation. Approximately 50 companies control over 65% of world's poultry production (Mulder, 2013). So, it needs government intervention.

Avian influenza is a great threat to poultry industry. To reduce the threat the country should have surveillance system for the virus in poultry and migratory birds (Haque et al 2013). There is debate on methods of control of avian influenza in the country. Experts' opinion should be sought in taking decision by the Government. The persistent co-circulation of natural H5N1/H9N2 viruses along with poor biosecurity measures underlines the importance of providing poultry farmers and small-holder poultry producers with educational programs about appropriate control measures for avian influenza (Monne *et al.* 2013).

Training on poultry rearing and management should be mandatory for the poultry farmers. All farms should be registered with government office at DLS

Selling of live birds in the market may be phase out step by step.

Lack of data on poultry sector is one of the obstacles for proper planning and implementation of any developmental programmes. So establishment of a reliable and comprehensive data bank is prerequisite for the development of the poultry industry.

Poultry development policy should be implemented for the development of poultry sector.

Poultry farmers at rural areas throughout the country are operating the poultry farms independently and highly unorganized. If they are organized, then the picture of poultry industry will be different. All the stakeholders will be benefited from the action of the farmers' organization.

Indigenous chicken comprises about 50% of the total poultry population of the country. Although genetically their productivity is low but they are survived in harsh rural condition where feed is scarce, housing and medicare facilities are inadequate, improper or absent. There is scope for development of indigenous chicken through better feeding and management. Commercial diets may contribute to growth, mortality and profitability of indigenous chicken (Sarker, 2013).

## **Export market**

There is a group of entrepreneurs who have intention to go for export market with chicken meats and eggs. The interested group may be encouraged to prepare themselves for export markets about good production practices, processing of safe and quality product through adoption of HACCP System and compliance with trade regulations. Growth in poultry products export not only brings in additional foreign exchange for the country but benefits a large number of people involved in the production, processing and export of such products.

## Conclusion

Poultry industry is one of the important industries in Bangladesh in terms of employment avenue and source of protein supply at cheaper price for the nation. All categories of stakeholders should participate in policy formulation for the development of the poultry industry. Policy should be based on reliable and comprehensive field data. For the protection of national interest the government should be more active in implementation of poultry development policy in the country. Poultry farmers should be organized into group and follow the scientific management system.

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