

Poultry Contract Farming in Bangladesh with Special Reference to Aftab Bahumukhi Farm Limited (ABFL)

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***Abstract:** Present paper describes the different forms of contract farming in and around the world and also the forms being practiced in poultry production in Bangladesh. It also describes the factors leading to the sustainable development and growth of contract farming. Attempt has been made to have a deep look into the matter regarding poultry production by envisaging Aftab Bahumukhi Farm Ltd (ABFL), the pioneer and leader in this sector. ABFL started contract farming as an experimental basis with a group of 20 local farmers in 1991 and after that based on the initial experience, they launched an elaborated vertically integrated poultry contract farming as an income generating activity for the local people by providing financial, technical and professional supports. Any farmer located in the ABFL's operating area is eligible to enter into contractual agreement. The company provides DOC, feeds, veterinary services and technical supports on credit and ensures purchase of the output. Contract farmers typically provide land, housing, equipment and labor. All the credit liability of the contract farmers are adjusted against the value of their delivered products. After 2003, the company had changed their arrangement from input supply on credit to cash. The company consists of a modern hatchery for broiler and layer parent stock supplying DOCs and has got its own large feed mills distributing balanced feed to the contract growers as well as to other growers throughout the country. The farm also has established its own managed retail sales centers in Dhaka city to supply eggs and poultry meat to the consumers and to large super stores and other corporate consumers. Despite some limitations, contract farming model developed by ABFL, has made significant contribution to the creation of employment to the rural poor.*

INTRODUCTION

The present era of globalization and liberalization has witnessed significant changes in agriculture – the mainstay of the economy of Bangladesh. These changes include

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cropping technology as well as cropping patterns. Export oriented products and processed food items occupy a vital position in the market these days. Such value added agricultural product needs heavy dose of costly inputs, improved crop varieties, and advanced technology to comply with the quality standards set by the international organizations like the WTO. Contract farming proves to be beneficial to and fulfils the desired demand of both farmers and companies. In Bangladesh, most of the farmers belong to small and marginal categories, and are found resource poor. At the same time, the agro processing farms are lacking in possession of land for cultivation of high value crops. That is why these companies come forward with contracts in providing such costly inputs, improved crop varieties and advanced technology to the resource poor farmers (RCDC : 2011). Hence, contract farming is seen as a tool for fostering smallholder participation in the new high value product markets, and improving standards, thus increasing and stabilizing smallholders income (Prowse: 2007).

Contract farming can be defined as an agreement between farmers and processing and/or marketing firms for the production and supply of agricultural products under forward agreements, frequently at predetermined prices (Eaton and Shepherd : 2001). The basis of such agreements is a commitment on the part of the farmer to provide a specific commodity in quantities and at quality standards determined by the purchaser and a commitment on the part of the company to support the farmers' production and to purchase the commodity. The World Development Report -2008 strikes an optimistic note on the potential for reducing poverty through contract farming and a greater focus on strengthening market oriented producer organization and dispute resolution mechanisms between farmers and farms to enhance the chances of win-win outcomes for both the parties through this institutional innovation (Prowse : 2007). In Bangladesh due to the wave of globalization and rapid expansion of agribusiness, there is a growing concern that the small and marginal farmers may find it difficult to compete with the market economy. It is also being witnessed that such farmers are becoming marginalized, as the scale of economies assuming increasing importance for profitable crop production. There is a continued drift or migration of these small and marginal farmers to the urban areas, which is a consequence of their growing economic challenges. Again our growth of population is approaching at quite a faster rate and consequently the pressure on land and water is alarmingly high. We, therefore, need to capitalize on cost of agricultural production, its quality and technology transfer. On the other side, the agricultural based food industry requires timely and adequate inputs of good quality agricultural produce (Kumar and Kumar: 2008). Against this backdrop, contract farming is considered to be a real instrument to address many of the traditional limitations of the agriculture sector of Bangladesh. Keeping this in view, the present study was conducted to attain the specific objectives stated below.

1.1 REVIEW OF RELATED LITERATURE

While contract farming dates back to the 19th century in the United States and at least to the 1940s in Latin America, in recent years, the practice has undergone substantial expansion throughout the developing world (Matthew : 2000). This expansion has brought considerable attention from both supporters and critics of contract farming. Consequently a good number of research works have been conducted on this issue in different fronts. A brief review of literature regarding contract farming of agri-products in home and abroad has been presented in the following paragraph.

Warning and Hoo (2000) in their study paper have attempted to describe the impact of contract farming on the distribution of income in rural communities mainly located at the Central American countries.

Runsten and Key (1996) studied the role of contract farming in the economy of developing countries with special emphasis on the Mexican economy and have observed its positive role in the generation of income for the rural people therein.

Little and Watts (1994) in their study have described how contract farming have brought about a drastic change in the agri sector of some of the Sub-Saharan African countries and how this system gradually becoming more and more important in their economies.

Glover (1989) in his paper has revealed how the smallholder growers have been affected by the introduction of contract farming in some of the eastern and southern African countries

RCDC (2011) in their report has focused mainly the prospects and constraints of contract farming in Odisha, India, and have detailed many relevant issues encompassing successful contract farming thereof.

Jobber (2007) in his report has emphasized mainly the different types of formal and informal contract farming in poultry in Bangladesh and implication of contract types thereof.

Kumar and Kumar (2008) have studied the problems and prospects of contract farming in the state of Karnataka in India and its effect on income and employment and found income and employment generation become higher, almost double on contract than non-contract farms.

HDRC (2008) in its research paper on contract farming of tobacco in Bangladesh has focused mainly on the socio-political dimensions of the cultivation of tobacco for farmers

as well as the sponsor companies involved and concluded that tobacco cultivation can no more be encouraged and should be replaced by the cultivation of suitable food crops considering its negative social effects.

Jobber and Others (2007) in their study report on alternative arrangements for contract farming in poultry in Bangladesh and their impacts on equity described the major poultry contract growers in Bangladesh in a very short span and have offered some recommendations for their effective operations.

Aziz and Miah (2005) in their study on family poultry farming system in developing countries have stressed on economic justification of the introduction of family poultry farming model herein Bangladesh by drawing an excellent example of ABFL in a brief version and advocated for their replication in the other developing countries.

A brief review of literature on contract farming shows that the issue has not been studied with its due importance in the economy of Bangladesh specially in poultry sector, the most rising in the agri sub sector. No comprehensive study has so far been conducted to depict the issue more vivid. The present study is an attempt to have a deeper look into the issue by describing how contract poultry farming operations by ABFL has brought about the changes over the traditional poultry farming as well as marketing system in Bangladesh.

1.2 OBJECTIVE OF THE STUDY

The objective of this paper is to gain a better understanding about the different forms of contract farming of poultry in Bangladesh by exposing one successful leader farm's activities to explore whether contract farming in poultry in Bangladesh is economically viable or not. The specific objectives of this paper are –

1. To state the different forms of contract farming in poultry in Bangladesh,
2. To explore the conditions contributing to the successful growth and development of contract farming in poultry in Bangladesh, and
3. To explore the performance of ABFL as the most successful contract poultry grower in Bangladesh.

1.3 METHODS AND MATERIALS AND SCOPE OF THE STUDY

The study is descriptive in nature and both primary data and secondary data have been used to conduct the study. Keeping the specific objective in mind, the stated farm has been intensively visited over a period of two weeks along with its top level executives

and field level workers in order to find facts around the farm. Therefore, personal observation, informal interview with field level workers and formal interview with executives supported by a set of pre-tested open end structured questionnaire technique have been followed in the process of collecting primary data. Relevant books, publications, magazines, journals and articles from home and abroad have been studied in the phase of collecting secondary data - the list which has been cited in bibliography and reference section of this paper. The study has got some limitations in that it has focused only a single wing of contract farming amongst a lot many wings – dairy, fisheries, vegetables, fruits, cereal crops, cash crops etc. Again, no comparison between contract and non contract growers has been made to know the comparative status thereof as to prove the effectiveness of contract farming in Bangladesh. Moreover no policy recommendations have been offered for the viable operation of this farm and contract farming as a whole to make this paper a complete one. Breeder-stock farming – a major forms of contract farming by ABFL has also not been studied in this report. Further research is apprehended to address all these issues not incorporated in this paper.

1.4 ORGANIZATION OF THE STUDY

This paper consists of four sections, the first of which deals with the introductory discussion regarding the conduction of this study. The second section describes the different forms of contract farming around the world and also herein Bangladesh in practice. Key preconditions for successful contract farming have been depicted in a brief version in the third section, and concluding section of this paper deals with a case study on Aftab Bahumukhi Farm Limited – the most successful contract grower of poultry in Bangladesh.

2. TYPES OF CONTRACT FARMING AROUND THE WORLD

Contract farming can be structured in a variety of ways depending on the crop, the objectives and resources of the sponsor and the experience of the farmers. Contracting out production is a commercial decision to facilitate an adequate supply within a designated period and at an economic price. Any crop or livestock product can theoretically be contracted out using any of the models; however, contract farming arrangements fall into one of the five models viz : Centralized model, Nucleus Estate model, Multipartite model, Informal model and Intermediary model. A brief discussion of each of the types is presented in the following paragraphs.

2.1. Centralized model

This is a vertically coordinated model where the sponsor purchases the crops from the farmers and processes or packages and markets the product. Except in a limited number

of cases, farmer quotas are normally distributed at the beginning of each growing season and quality is tightly controlled. This can be used for crops such as tobacco, cotton, paprika, sugar cane, banana, coffee, tea, cocoa and rubber. This model -

- Involves a centralized processor and/or packer buying from a large number of small farmers
- Is used for tree crops, annual crops, and poultry, dairy. Products often require a high degree of processing, such as tea or vegetables for canning or freezing
- Is vertically coordinated, with quota allocation and tight quality control
- Sponsors' involvement in production varies from minimal input provision to the opposite extreme where the sponsor takes control of most production aspects

2.2. Nucleus Estate model

This is a variation of the centralized model. The promoter also owns and manages an estate plantation (usually close to a processing plant) and the estate is often fairly large in order to provide some guarantee of throughput for the plant. Nucleus estates have often been used in connection with resettlement or transmigration schemes, such as in Indonesia and Papua New Guinea, for oil palm and other crops. While mainly used for tree crops, there are examples of the nucleus estate concept with other products. Indonesia, for example, has seen the operation of dairy nucleus estates, with the central estate being primarily used for the rearing of "parent stock". This model -

- Is a variation of the centralized model where the sponsor also manages a central estate or plantation
- The central estate is usually used to guarantee throughput for the processing plant but is sometimes used only for research or breeding purposes
- Is often used with resettlement or transmigration schemes
- Involves a significant provision of material and management inputs

2.3. Multipartite model

The multipartite model usually involves statutory bodies and private companies jointly participating with the local farmers. The model of contract farming may have separate organizations responsible for credit provision, production, and management, processing and marketing of the produce. This model is widely used in Mexico, Colombia, Kenya, China and some countries of West Africa. This model -

- May involve a variety of organizations, frequently including statutory bodies

- Can develop from the centralized or nucleus estate models, e.g. through the organization of farmers into cooperatives or the involvement of a financial institution.

2.4. Informal model

This model is basically run by individual entrepreneurs or small companies who make simple, informal production contracts with farmers on a seasonal basis. Normally crops requiring only a minimal amount of processing or packaging for resale to the retail trade or local markets, such as vegetables, watermelons, and tropical fruits can be useful for this model. Financial investment is usually minimal. This is perhaps the most transient and speculative of all contract-farming models, with a risk of default by both the promoter and the farmer. This model –

- Is characterized by individual entrepreneurs or small companies
- Involves informal production contracts, usually on a seasonal basis
- Often requires government support services such as research and extension
- Involves greater risk of extra-contractual marketing

2.5. Intermediary model

This model has formal subcontracting by companies to intermediaries (collectors, farmer groups, NGOs) and the intermediaries have their own (informal) arrangements with farmers. Throughout the Southeast Asia the formal subcontracting of crops intermediaries is a common practice. In Thailand, for example, large food processing companies and fresh vegetable entrepreneurs purchase crops from individual “collectors” or from farmer committees, who have their own informal arrangements with farmers. The use of intermediaries must always be approached with caution because of the danger of sponsors losing control over production and over prices paid to farmers by middlemen. In short, subcontracting disconnects the direct link between the sponsor and farmer. This can result in lower income for the farmer, poorer quality standards and irregular production. This model -

- Involves sponsor in subcontracting linkages with farmers to intermediaries
- There is a danger that the sponsor loses control of production and quality as well as prices received by farmers

Table 1: Characteristics of contract farming structures

STRUCTURE – MODEL	SPONSORS	GENERAL CHARACTERISTICS
Centralized	Private corporate sector State development agencies	Directed contract farming. Popular in many developing countries for high value- crops. Commitment to provide material and management inputs to farmers.
Nucleus estate	State development agencies Private/public plantations Private corporate sector	Directed contract farming. Recommended for tree crops, e.g. oil palm, where technical transfer through demonstration is required. Popular for resettlement schemes. Commitment to provide material and management inputs to farmers.
Multipartite	Sponsorship by various organizations, e.g. <ul style="list-style-type: none"> • State development agencies • State marketing authorities • Private corporate sector • Landowners • Farmer cooperatives 	Common joint-venture approach. Unless excellent coordination between sponsors, internal management difficulties likely. Usually, contract commitment to provide material and management inputs to farmers
Informal developer	Entrepreneurs Small companies Farmer cooperatives	Not usually directed farming. Common for short-term crops; i.e. fresh vegetables to wholesalers or supermarkets. Normally minimal processing and few inputs to farmers. Contracts on an informal registration or verbal basis. Transitory in nature.
Intermediary (tripartite)	Private corporate sector State development agencies	Sponsors are usually from the private sector. Sponsor control of material and technical inputs varies widely. At time sponsors are unaware of the practice when illegally carried out by large-scale farmers. Can have negative consequences.

Source: Eaton and Shepherd: 2001

3. KEY PRECONDITIONS FOR SUCCESSFUL CONTRACT FARMING

Three factors have been identified that lead contract farming of poultry a success and they are – a) a profitable for the produce b) suitable physical and congenial social environment, and c) careful and generous government support. All those have been discussed in the following paragraphs in a brief version.

3.1. A Profitable Market

Profit for the sponsor

The sponsor's decision to invest in a particular market must be based initially on the knowledge that, subject to certain conditions, it will be profitable. However, contract farming is then just one of a number of solutions to a commercial market opportunity. A market must have the capacity to remain profitable in the longer term. In the case of tree crops, for example, prices tend to be cyclical. An analysis of economic viability carried out when prices are high would produce very different results than those obtained at the bottom of the price curve. A "sensitivity analysis" is thus required to ensure that production can be carried out profitably even when prices are low.

Profit for the farmer

If either the sponsors or their contracted farmers fail to achieve consistent and attractive financial benefits a venture will collapse. A further precondition, therefore, is that the sponsor needs to be sure that farmers will obtain higher net incomes from entering into a contract than they could from alternative activities with the same, or less, risk. Sponsors should calculate realistic yields in order to forecast whether production by farmers can be profitable at prices the sponsors are able to pay. These estimates should be based on the experience of farmers in the chosen area, their historical production data, soil fertility and, sometimes, field trials. Once estimates are compiled and production costs known, the sponsors are in a sounder position to calculate a realistic pricing structure that is mutually profitable. Guaranteed, regular and attractive incomes should encourage farmers to make a long-term commitment.

3.2. The Physical and Social Environments

The main factors affecting the success of all agribusiness ventures are: The physical environment; Utilities and communications; Land availability and tenure; Input availability; Social considerations; Transportation facilities; and Medical facilities.

The physical environment

The success of any agricultural investment requires that two multidimensional preconditions be met. Firstly, the general suitability of the topography, climate, soil fertility and water availability. Secondly, the suitability of the physical environment for the specific plant genotype or animal for which there is a market demands. The extent to which all these factors interact determines production yields, quality and profitability.

Utilities and communications

A major precondition for agricultural investment in rural areas is the existence of an adequate communication system that includes roads, transport, telephones and other telecommunication services. Reliable power and water supplies are particularly vital for agro-processing and exporting of fresh produce. The availability of suitable educational and medical services is also important for those who participate in contract farming, whether they be direct employees of the sponsor or the farmers themselves.

Land availability and tenure

Contract farming can involve a wide diversity of land ownership and tenure arrangements. Farmers under contract must have unrestricted access to land. There must be an awareness and understanding on the part of management of how farmers gain access to land for cultivation and for that access to be acceptable within the framework of the contract. In the majority of projects, sponsors contract directly with farmers who either own land or have customary land rights within a communal landowning system. However, within a single project there can be numerous variations of land tenure, including freehold title, formal lease of state land, leases from the sponsor's own estate and informal seasonal arrangements with landlords.

Input availability

In most contract farming ventures the sponsors recommend, procure and distribute many or all of the material inputs. Sponsors need to be assured that they will be able to organize the supply of all necessary inputs for the farmers and for their own processing needs. All inputs should be identified and ordered well in advance, either from local sources or from overseas. Contract farming ventures call for varying levels of inputs depending on the nature of the crop and the degree of the farmers' sophistication. Farmers require a multitude of structural and material inputs that include curing barns, grading sheds, fuel, fertilizer, imported seed, electronics generator, pesticides and cultivation advances. Failure to have ready access to these can cause serious disruption to the production chain

and can result in serious financial losses for all parties. Similarly, the failure of managers to supply feed on time to poultry and pig rearers can have major consequences for the farmers.

Social considerations

Many rural communities are wary of modern agribusiness and strongly influenced by traditional practices. Conventional societies are normally more conservative in their ambitions and material needs. There are often great disparities in cultural attitudes towards work. Before beginning a venture, managers need to develop an understanding of the cultural attitudes of those with whom they are working. They must also be particularly aware of the possibility of disputes when there is more than one cultural group working on the contract. There is always the possibility that the economic success of a contract farming venture could, in fact, have social repercussions that jeopardize its long-term success. This may occur, for example, because the opportunity to participate is limited to a certain number of farmers. If farmers are chosen on the basis of the size of their farms and resources, contract farming may widen pre-existing economic disparities and lead to resentment on the part of those excluded.

3.3. Effective Government Support

Governments have to play an important role if contract farming is to be successful. A relevant legal framework and an efficient legal system are preconditions. Moreover, governments can do much to foster success by developing linkages between investors and farmers and can play an important role in protecting farmers by ensuring the financial and managerial reliability of potential sponsors. The role of national governments and their local agencies can be divided into :

- The enabling and regulatory role; and
- The developmental role.

The enabling and regulatory role

Contract farming depends on either legal or informal agreements between the contracting parties. These, in turn, have to be backed up by appropriate laws and an efficient system. In the context of contract farming, the enabling aspects of the law say, laws of contract, is perhaps the most important. A sponsor entering into agreement with a cooperative also needs to be assured that the cooperative is on a sound legal footing. Governments need to be aware of the implications of all laws and policy decisions on agribusiness development and how these policies influence contract farming. Sometimes it is desirable

that government should play an arbitration or dispute resolution role among the agreed parties for smooth functioning of the same. Government services, such as quarantine controls, plant pathology clinics and research stations are important, especially for companies that invest in high value crops for export or in organic farming. Other government enabling activities to sustain contract farming include the provision of training in technological and managerial skills at all levels, initiation and facilitation of research studies into the product under contract, and provision of agricultural extension services to ventures who do not employ their own field staff.

The developmental role

For the promotion of contract farming at a rapid rate, government should play its role in the reallocation of development resources. For example, the Philippines Government, with assistance from an FAO project promoted contract farming for small scale farmers who were allocated land under the agrarian reform programme (Eaton and Shepherd : 2000). Where contract farmers are organized into cooperatives or groups, governments can play their roles by carrying out activities to strengthen their managerial skills. Again the government has a role to play in ensuring that companies proposing to invest in contract farming are bona fide and are planning long term partnership arrangements with farmers, rather than short term operations which may leave farmers with considerable debts. Some projects may require considerable amount of capital to invest and elaborate infrastructural facilities where governments have to play pivotal roles for their successful and effective implementation.

4. POULTRY PRODUCTION SYSTEM IN BANGLADESH

Poultry production as an emerging agri-business started practically during the eighties and today has taken up the shape of an industry with the beginning of small scale commercial broiler and layer farming in the early 1990's. Present production system of poultry in Bangladesh can be divided into the following four categories:

1. Traditional System of Poultry Production: Bangladesh bears a long historical record of rearing poultry under traditional backyard farming. Poultry keeping is an integral part of the rural farming system providing a sustainable family income in rural areas for the small, marginal and landless poor. About 89 percent of the rural households of Bangladesh keep poultry with an average of 6.8 birds per holding (Huque : 2001). The purpose of this type of farming is to providing eggs and meat for family consumption and partly for family income generation.

- 2. Semi-scavenging System of Poultry Production:** This system of poultry production is developed in collaboration with the Department of Livestock Services (DLS) and NGOs (especially BRAC) to offer as a model for income generation for distressed and poor women and unemployed youths in the rural areas of Bangladesh. Smallholder Livestock Development Project (SLDP – 1 and SLDP – 2), Participatory Livestock Development Programme (PLDP -1 and PLDP -2), Poultry for Nutrition (PFN) are some of the examples of the same.
- 3. Commercial Farming System of Poultry Production:** This system of poultry farming is mostly initiated by private sector by distributing commercial broiler and layer hybrid day –old-chicks (DOC) produced in their in their hatcheries from imported and recently locally produced parent stock. The farmers involved in this commercial farming are usually small, medium and also large scale operators concentrated mainly around the large cities and semi-urban area and to some extent to the local areas of Bangladesh. A recent survey by BRAC on 33000 farms in 137 Upazillas under 37 districts reports that 48 percent farms have 200-500 birds, 26 percent farms have 501-1000 birds, 22 percent farms have 1001-3000 birds and 4 percent farms have more than 3000 birds. About 110800 different sized farms have been established in this country (BRAC Report : 2005)
- 4. Contract farming System of Poultry Production:** Contract farming system is an important pattern of farming system for the rapid growth of poultry industry in Bangladesh. Generally, the contract system poultry raiser may have its own or arranged land, house, equipment and labor. The contracting companies are responsible for supply of DOCs, balanced feed, medication, and management advice including health management. Loan may also be considered within this arrangement. In return, they buy the production back from contract farmers for marketing as live or dressed meat through their outlets or super markets or institutional buyers. Aftab Poultry and BRAC along with some other large farms are involved in this system of poultry production. The following table shows the recent trends in the growth of commercial poultry sector during the period of 1991 – 2008:

Table -2: Growth of commercial poultry in Bangladesh (figures in thousands)

Particulars	1991	2000	2001	2002	2003	2004	2005	2006	2007	2008*	Growth (%)
Layer											
Parent Stock	22.5	145	236	370	138	344	212	282	379	398	24.02
Day Old Chick per year	2025	13050	21240	33300	12420	30960	19080	25380	32492	34117	23.38
Day Old Chick per week	38.9	250	408	640	239	595	367	488	625	656	23.4
Price of DOC (per pc)	16	27.78	23.26	15.15	27.33	28.21	25.67	35.20	36.96	21.84	23.40
Broiler											
Parent Stock	30	750	1062	1381	1952	2358	2292	2745	4176	5011	22.29
Day Old Chick per year	3540	90000	100359	116000	163968	164148	192528	288225	325650	390780	16.85
Day Old Chick per week	68	1730	1929	2230	3153	3156	3702	5542	6263	7516	16.86
Price of DOC (per pc)		24.6	19.32	21.09	17.09	13.2	24.46	25.61	23.13	24.84	24.02

Source: BPIA (2002), BRAC (2005), DLS (2006), AHCAB (2009)

*Estimated values assuming 20% further growth for broilers and 5% growth for layers.

5. TYPES OF POULTRY CONTRACT FARMING IN BANGLADESH

Contract arrangements in the poultry sector in Bangladesh can be of the following three types:

- 1. Formal Production–marketing Contracts:** relevant actors are involved in contracts within a vertically integrated enterprise for supply of inputs and services, sell outputs, and share risks and benefits. Here the contracting agreements are written and the documents are signed by the parties involved. The main actors in this arrangement in Bangladesh are Aftab BAHUMUKHI Farms Ltd (ABFL) in Kishoregonj district, Biman Poultry Complex in Savar near Dhaka district and BRAC's poultry operations in a number of districts in Bangladesh. Characteristics of these three enterprises are summarized in the following table :

Table-3. Summary of characteristics of farms with formal production–marketing contracts

	Aftab Ltd	Biman	BRAC
Year established	1992	1997	2003
Products covered	Broiler, Breeder stock	Broiler	Broiler
Vertical integration	Yes	Partial	Partial
Input supply	Credit till 2003, then cash	On credit	On credit
Output purchase	Market price plus margin	Fixed price	Fixed price
Production risk	100% producer with insurance	100% producer	100% producer
Price risk	Shared	Producer	Producer
No of producers	350 and 122	25	215
Batch size	1500-2500 Av 1800	1000-5000 Av 2500	500-2000 Av 800

Source: Jobbar et al (2007)

- 2. Formal Input-marketing contracts** – relevant actors are involved in contracts for supply of one or more inputs and services, generally to market agents who directly deal with producers. The agreement is documented in writing and signed by the parties concerned. In Bangladesh, Kazi farms Ltd., Paragon Poultry Ltd., and Nourish Poultry & Hatchery Ltd practice formal input marketing contracts. A brief discussion of their operations are presented in the following table :

Table-4: Summary of characteristics of farms with formal input – marketing contracts

	Kazi Farms	Paragon Poultry Ltd.	Nourish Poultry & Hatchery Ltd.
Year established	1996		
Inputs covered	DOCs, feeds	DOCs, feeds	DOCs, feeds
Other services	Vet service free, drugs at cost Help product sale	Vet service free, drugs at cost Help product sale	Vet service free, drugs at cost Help product sale
Mode of payment	Cash , advance	Cash , advance	Cash , advance
Production risk	100% producer	100% producer	100% producer
Price risk	100% producer	100% producer	100% producer
No of trader agents	600	250	160
Volume of business per week	1.5 mil DOCs 3500 t feeds	0.4 mil DOCs 1000 t feeds	0.3 mil DOCs 2300 t feeds

Source: Jobbar et al (2007)

3. Informal Output-marketing Contracts – primarily a forward-purchase contract in which contractors purchase output from existing producers. The agreement is basically verbal or in a form that may not be considered acceptable in a formal court for dispute settlement. Other than the producers, aratdars, wholesalers and output retailers are the three main actors in the output marketing chain. The aratdars and wholesalers of eggs in Dhaka city sometimes make forward purchase contracts with layer farmers in Gazipur District. They also sometimes make contracts with agents who then buy eggs from producers with or without prior contract to supply the aratdars. The difference between this arrangement and formal contract is that these forward contracts are made with existing farms rather than for the establishment of new farms (Jobbar et al: 2007).

6. BROILER CONTRACT FARMING BY AFTAB BAHUMUKHI FARMS LTD

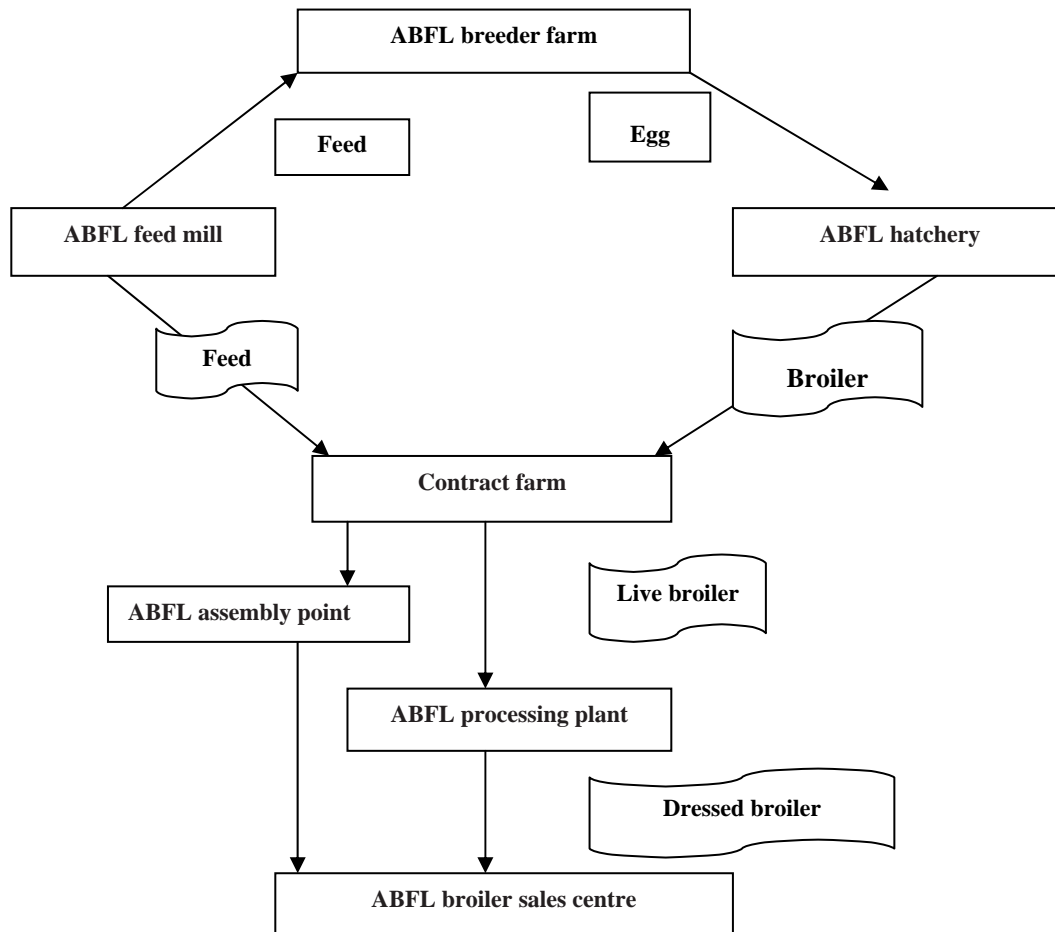
The Aftab Bahumukhi Farms Ltd (ABFL), a multi-enterprise company is one of the subsidiary companies of the Islam Group of Companies, Dhaka. The ABFL established a broiler farm in the rural area of Bhagalpur under Bajitpur Thana in 1991 in the District of Kishoreganj. The ABFL is operating its activities in the different phases of poultry production, marketing and services viz: parent stock (breeding), production of broiler and layer DOC in a modern hatchery machine, contract growing of broiler and layer, feed mill operation, and poultry processing plant. It started contract farming as an experimental program with a group of 20 farmers. Based on the initial experience, in 1994, the ABFL took up an elaborated vertically integrated contract growing programme involving rural people in poultry farming as an income-generating activity by providing technical and professional support. As the ABFL started as an agro-based firm, it included farms of all sizes in its poultry and other farm programmes.

On the six sub-district of District of Kishoreganj ABFL is performing their activities, and these are: Bajitpur, Kuliarchor, Kotiyadi, Kishoreganj, Pakundiya and Hossenpur . The ABFL has developed into a vertically integrated firm over time and has established its own feed mill and hatchery. The firm consists of a modern hatchery that produces 60 000 broiler and layer parent birds and supplies 100 000 day-old chicks per week to the fast-growing poultry industry. The firm has also established four self-managed retail sales centres in Dhaka city to supply eggs and poultry meat to consumers. It markets 90% of its total live broiler by its own sales centres; 10% directly to consumers and 80% to wholesalers-cum-retailers in Dhaka city. The Poultry Complex of the ABFL is already one of the largest in the country. The ABFL's poultry feed mill was first established primarily to provide balanced feed for the ABFL contract poultry farms. It was later expanded to meet the wider demand for poultry feed in the country. At present, ABFL has two feed mills: Rupshi at Narayanganj and Bhagalpur at Kishoreganj, to meet the demand of chicks.

Any farmer located in ABFL's operation area is eligible to enter into a contractual agreement. According to the agreement ABFL extends to a full credit facility to the farmers for supply of required numbers of day old chicks as per house capacity, monitoring of health, vaccines, medicines, feed, technical services etc and marketing the final products. The farmer needs to build a poultry shed at his own land ensuring congenial and health environment for better performance of the birds under the direct supervision of the ABFL technical staff. The credit liability of a contract grower is adjusted against the price of their products. It has also introduced an internal insurance like safety and security scheme to cover the risk of loss and safeguard the interest of the contract growing farmers in case of immature death of chicks by disease and other cogent

reasons (Aziz and Miah : 2005). This form of agreement was in operation during the period from 1994 – 2003. But after the outbreak of bird flu in and around the Southeast Asia in 2003, the ABFL has changed the arrangement from the supply of input on credit to cash. Again after 2003, when the price of poultry fell drastically due to bird flu rumor in Bangladesh, they also bring a change in their agreement in that contract farmers would be paid a price of their final products for an amount lower than the prevailing market price. For example, in 2003, farmers were paid TK. 53 per kg when market price was TK. 60 per kg live weight, in order to cover the procurement and distribution costs of ABFL (Jabbar et al : 2007). The following figure shows the vertical stages of the ABFL's broiler contract farming:

Figure- 1: Analysis and structure of ABFL in contract farming on broiler industry:



Source: Jabbar et al (2007)

ABFL collects egg from farmers after first hatch of egg i.e. 21 days of egg and give payment to the farmer at the rate of 7 TK per egg. The company collects egg at every 15 days interval from 24 weeks of the age of the bird. The collected eggs are counting after candling and gives payment of 15 days to the farmer at @ 13.75/egg deducting the expenses of the representative 15 days. The expenses include feed costs, medicine costs and labor costs. After deducting the expenses 20000 tk. deposited to the bank against loan and the rest of the money give to the farmer. 65 to 68 days aged of birds supposed to be culled. Both ABFL and farmers can sell the cull birds. If farmers sell the cull birds, he deposits the money on the code account. If the company sells the cull birds, the company deducting the price of culls birds from the loan. From one to five months the farmers take the loan when necessary on behalf of repay assurance. Farmers take everything from the company on credit. The egg comes after six months then the farmer provides the egg to the company on words to peak production hour. Then the company deducts their loan by selling the egg to the market. After culling the whole bird, the company calculate how much money he recover from loan and how much money due, deducting all the dues, the rest of the money give to the farmer. The sharing of responsibilities between contract farmers and ABFL in the vertically integrated farming system is presented in the following table:

Table -6. Sharing of responsibilities between the contract farmer and the contractor (ABFL) in broiler production

Particulars	1994-2003		2003 to onwards	
	Contractor	Farmer	Contractor	Farmer
Land, buildings and equipment		✓		✓
Manure handling, storage and disposal capacity		✓		✓
Day-old chicks	✓ *		✓ **	
Feed ingredients, processing and delivery	✓ *	✓	✓ **	✓
Fuel, electricity and telephone		✓		✓
Facility repairs		✓		✓
Veterinary services and medicine	✓ *		✓ **	
Transportation cost of all input and output		✓		✓
Labor: production and maintenance		✓		✓
Labor: supervisory and specialists	✓		✓	

Note: * = on credit and ** = in cash.

Source: Jabbar *et al.* (2007).

After the introduction of contract farming by ABFL in its locality, it has brought about some positive changes in the production and marketing system by ensuring regular production and supply of broiler and layer poultry for the company as well as some social and economic changes for the growing farmers through income and employment generation thereby improving their quality of lives. The scenario of broiler contract farming during the year 1994 – 2002 and layer contract farming in 2005 and its different aspects of benefit for the rural poor are shown in table and respectively:

Table-7: Performance of broiler contract farming by ABFL during the period 1994 - 2002

	1994	1995	1996	1997	1998	1999	2000	2001	2002
No. of contract broiler farms	20	50	75	100	150	200	350	458	650
No. of birds (housed/month)	12500	31250	46875	62500	93750	125000	218750	235000	450000
Average income (TK./flock of 1500 birds)	6300	9000	8500	8800	9500	10200	10400	10000	10000
No. of families directly benefited	80	200	300	400	500	600	1050	1500	3000
No. of persons directly benefited	560	1400	2100	2800	3500	4200	7250	12600	25000
No. of families indirectly benefited	20	50	75	100	150	200	350	600	1100
No. of persons indirectly benefited	100	250	375	500	750	1000	1750	3000	5500

Source: Aziz and Miah (2005)

Table-8 : Existing scenario of layer contract farming by ABFL in 2005

No. of farms	Flock size (No.)	Income (TK./flock)	No. of family benefited directly	No. of person benefited directly
50	500	60000	150	1200

Source: Aziz and Miah (2005)

CONCLUSION

Poultry farming is attributed by the presence of huge amount of risks – production risk, price risk, distribution risk with mortality risk caused by death and diseases of birds predominating which impede the expected growth of poultry industry in Bangladesh. A large majority of poultry farmers are risk averse and they also lack in necessary amount of financial capital as well as bio-security based efficient farm management. Again there is no insurance system for independent poultry farmers in Bangladesh and also they are not capable enough to bargain individually with the market intermediaries effectively to bag fair price for their produces. The ABFL has introduced an internal insurance scheme to cover the loss of production for their contract farmers by creating a contributory security fund. In order to overcome selling problem, the ABFL has come up with a forward contract and purchase agreement to offer the farmers an assured market opportunity at pre-agreed prices. The ABFL has also successfully managed to provide technical know-how, managerial skills and medicare supports to the farmers who lack in proper technical knowledge of poultry farming in Bangladesh. Therefore the partnership existing between the ABFL and the contract farmers can contribute significantly to the future growth and development of poultry farming in Bangladesh if replicated with due considerations.

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