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Status and Potentials of Agricultural Processing in Bangladesh

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ABSTRACT

Bangladesh cannot sustain long-run economic progress without having a strong agricultural sector accompanied by a dynamic agribusiness sub-sector. This study has been undertaken as an exploratory study to assess the role and significance of agribusiness in Bangladesh along with the current status and future potentials. Various institutional and other weaknesses and challenges were deemed to exist in the country that prevents full realization of the potentials of this industry. At a general level, the paper recommends various structural, institutional, and market-friendly policy reforms accompanied by infrastructural developments in order to encourage entrepreneurship, innovation, and investments along with better and more effective strategic management of this sector. Such reforms are expected to promote better utilization of scarce resources to promote a strong, dynamic, and sustainable agribusiness sector that would be able to contribute substantially to industrialization and economic development of the country.

Keywords: *Agribusiness, Agricultural trade, Bangladesh, Agricultural development.*

INTRODUCTION

Bangladesh is a developing country in South Asia with large a population base (about 150 million), living in a small land area covering only about 55 thousand square miles, and having the highest population density in the world (ignoring the city state of Singapore). The country is primarily an agriculture-based country with a large proportion of population formally and informally depending on this sector for food, income, employment, and livelihood. Agribusiness is one of the most challenging businesses in the world. Bangladesh depends heavily on agriculture, but the prospects and potentials for agribusiness for this country is yet to be adequately understood, studied, and its enormous potential explored. This sector is at best in an emerging but nascent stage of development. Bangladesh cannot sustain long-run macroeconomic stabilization and economic progress without having a strong agricultural sector accompanied by a dynamic agribusiness sub-sector. Given the high importance of this topic, this exploratory study has been undertaken to assess the role and significance of agribusiness in Bangladesh along with the current status and future potentials. The study is conducted within an institution-based view of the world and examines the institutional and non-institutional factors that may prevent the country from realizing its full potential from agribusiness. The paper argues that various institutional, structural and policy reforms be made and effectively implemented so that the sector can contribute significantly towards the country's economic development.

If properly encouraged, promoted, and managed, agribusiness may have the potential to play a strong role in providing rural income, employment, food security, poverty alleviation, and improved external balance position, and thereby contribute to overall industrial and economic development of the country. As Bangladesh suffers from serious employment problems due to over-population and given that food availability is becoming scarcer in the country over time as population increases, income grows, and urbanization takes place, the potentials and prospects for agribusiness in the country should be viewed and explored as critical for the development of the country. As such strategic management of agricultural business and trade is extremely important so that core competencies can be created and proper supply chain management along with vertical and horizontal integration could be established in the process of promoting and developing agribusiness in the country. Further, one can safely argue that proper development and better management of the agribusiness in the country can also improve the country's scarce natural resource utilization and help achieve better ecological balance and environmental management in the context of the unfolding global warming and climate change. The study has been undertaken with following limited objectives in mind: first, to assess current situation of agribusiness in Bangladesh and its future potentials; second, to examine whether structural, institutional, infrastructural, and policy reforms will be needed to help achieve a viable and successful agribusiness sector in the country; thirdly, to provide some policy implications for proper strategic management to develop agri-business. The study is purely exploratory in nature. As such, the study is conducted primarily based on information obtained from secondary sources. Exact sources will be mentioned in the paper in inside-text citations and end of paper references.

Given the above limited objectives of this study, the next section provides a working definition and scope of agribusiness industry followed by a providing a framework for analysis of the paper. The section after deals with a brief review of literature, next the current status of agribusiness in Bangladesh is discussed followed by a section on potentials of agribusiness in Bangladesh. The next section deals with Institutional weaknesses facing the industry followed by a discussion of institutional strategies and policies for agribusiness development of the country. The last section gives the concluding remarks with a discussion of the shortcoming and limitations of the study and providing direction for further research.

OBJECTIVES OF THE STUDY

In the context the present research program was undertaken with the following major objectives:

1. To know the resources and inventory knowledge and its utilization.
2. To identify the skill requirement of for the implementation related guidelines.
3. To prioritize the immediate activities needed for the integrating the training module.
4. The objective of the assignment is to develop an agro-processing guideline.

METHODOLOGY

Methodology shows the approach by which the study is accomplished. It includes some sequential steps that are required for performing the study effectively. This study is mainly based on primary and secondary data through which the study is completed.

Data Collection: For conducting this report there have been collected primary and secondary data.

Primary Data: Primary data were collected from the respondents of the study area.

Secondary Data: As this is a primary and secondary based report therefore; this study mainly relied on data from published references, materials and information from other secondary sources like internet, published materials and different thesis on our seminar library. Different information from published articles are assembled and presented on this report by sequential steps.

Source of Data: Data were collected from the capital and the field level conducting interview, discussion and observation using primary source i.e. interview with the respondents from the selected study areas. Primary data were collected through interview. Data were also collected from secondary source through literature review i.e. reference books, newspapers, periodicals, articles from national and international level. Internet sources have been used for research. An attempt was made to include the latest information whenever available. The nature of the study requires combining analytical and empirical approaches in the methodology. Accordingly, both qualitative and quantitative information and data were required. In order to generate database of the study, all necessary information were collected from different primary and secondary sources. Data were also analyzed and presented through the use of necessary figures, tables and charts.

Methods of Data Collection; Researcher conducted the face to face interview with the respondents of the study areas. As per the plan for data collection the researcher communicated the concerned officials by emails, telephone/ mobile phone for appointment with the respective respondents. The researcher took help of his colleagues and friends during conducting data collection.

Variables: The research program formulated here is a type of technical field investigation comparing with previous performances. The main variables of the studies are:

A. Site:

* Hill districts
  i. Sylhet
  ii. Rajshahi
  iii. Dinajpur
  iv. Jashore

B. Respondents

1. Education and Training staff
2. Govt. and NGO field staff
3. Agri Project personnel
4. Selected civil officers and entrepreneur personnel
5. Local leaders
6. Business community
7. Hill and flatland lessee

Data Analysis: Data analysis is the main part of the report. It is also called the body of the report. In this stage, all the processed information was analyzed to fulfill the objective of the study. Different statistical tools and figures were used here to amalgamate the information collected from the secondary sources.

Tools	Application
MS Word	For creating tables, figures and for analyzing data
MS Excel and SPSS	For analyzing the statistical data collected from field

A proper interpretation was also presented here from the analysis of the information included in the research work. In case of analyzing data author has used quantitative analysis.

RESULTS AND DISCUSSION

The results obtained from the studies are presented and interpreted here as per objectives. The detailed results are given in the appendices.

Table 1: Percent response in favor of the items as per site districts

Item	Mango	Pineapple	Olive	Citrus	Guava	Jujube	Jackfruit	Mean
Hill districts	55	72	26	42	39	45	54	47.6
Sylhet	40	43	29	56	35	56	57	45.1
Rajshahi	59	31	47	47	48	58	39	47.0
Dinajpur	67	38	44	36	32	51	52	45.7
Jashore	59	41	63	48	51	63	54	54.1
Barishal	32	39	43	49	84	41	17	43.6
Dhaka	45	67	64	61	42	71	86	62.3
Mean	51.0	47.3	45.1	48.4	47.3	55.0	51.3	49.3

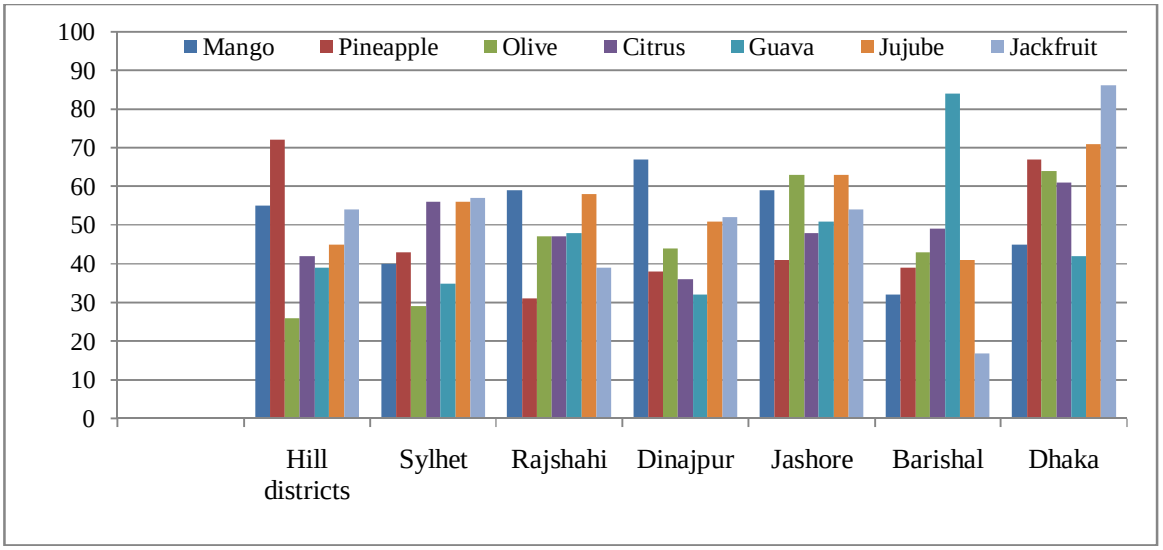

Figure 1: Percent response in favor of the items as per site districts

Table 2: Most Significant for Environmental Vulnerability

Item	Mango	Pineapple	Olive	Citrus	Guava	Jujube	Jackfruit	Mean
Naniarchar	55	68	26	82	39	45	54	52.7
Jaintia	30	43	29	76	35	56	57	46.6
Natore dor	59	31	47	47	78	58	39	51.3
Rangamati sodor	45	58	44	66	32	51	52	49.7
Kaliganj	59	41	63	48	51	63	54	54.1
Sajek	32	39	43	69	84	41	17	46.4
Bhaluka	25	67	64	61	42	71	89	59.9
Mean	41.7	46.5	48.3	61.2	53.7	56.7	51.3	51.3

Table 3: Percent response in favor of processing of commodity as per site

Item	Farmer training	Teacher's training	NGO staff	Volunteer training	Women training	Business man	Social worker	Mean
Juice	18	73	26	80	39	45	58	48.4
Pickle	30	43	49	75	75	56	77	57.9
Drying	70	31	47	47	78	58	69	57.1
Chem treat	15	68	44	66	32	51	52	46.9
Manufactur	14	41	63	48	36	83	54	48.4
Physc treat	42	39	22	63	24	41	27	36.9
Freezing	25	77	64	61	42	81	89	62.7
Mean	30.6	53.1	45.0	62.9	46.6	59.3	60.9	51.2

Identification of Constraints

The first and the most important objective of the study were to identify the major constraints the removal of which will ease the establishment and development of agribusiness in Bangladesh. The studies were planned to be worked with two separate but interrelated groups associated with agribusiness such as are farmer and agribusiness man.

a. **Farmer group:** Mostly farmers were selected from the small and medium group.

b. **Agribusiness man group:** Mostly Agribusiness men were selected from the small and medium group. The study areas covering 6 Divisions were below.

Identification of Constraints by Farmers

The results obtained from different studies within the piece of research are sequentially presented and described in this chapter. The major results are presented as identification of constraints, identification of potentials, general discussion followed by recommendations and highlight conclusions.

The study was designed to survey through a pre-tested questionnaire to two groups namely:

A. The Study Areas

The areas selected for the study are given in the Table 1 below. It may be seen from the Table that the study was conducted 23 Upazila of 22 Districts of 6 Divisions. The total number farmers involved in the study were 2390, the Rajshahi Division having the highest number 1105. This is due to the fact that the North West Crop Diversification Program (NCDP) with an agribusiness component was working in the area under the administration of Department of Agricultural Extension, Ministry of Agriculture. Some more information in this regard is given in the appendices and also in the Methods and Material.

Table 4: The agribusiness constraint study areas involving farmers

Division	District	Upazila
Dhaka	Dhaka	Savar
	Narayanganj	Fatullah
	Munsiganj	Gajaria
Rajshahi	Dinajpur	Birganj
		Sadar
	Rangpur	Mithapukur
Chittagong	Feni	Sadar

	Chittagong	SitaKunda
Barisal	Barisal	Bakerganj
	Patuakhali	Dumki
Khulna	Jessore	Keshabpur
	Jhenaida	Sadar
Sylhet	Habiganj	Bahubal
	Moulvibazar	Srimangal

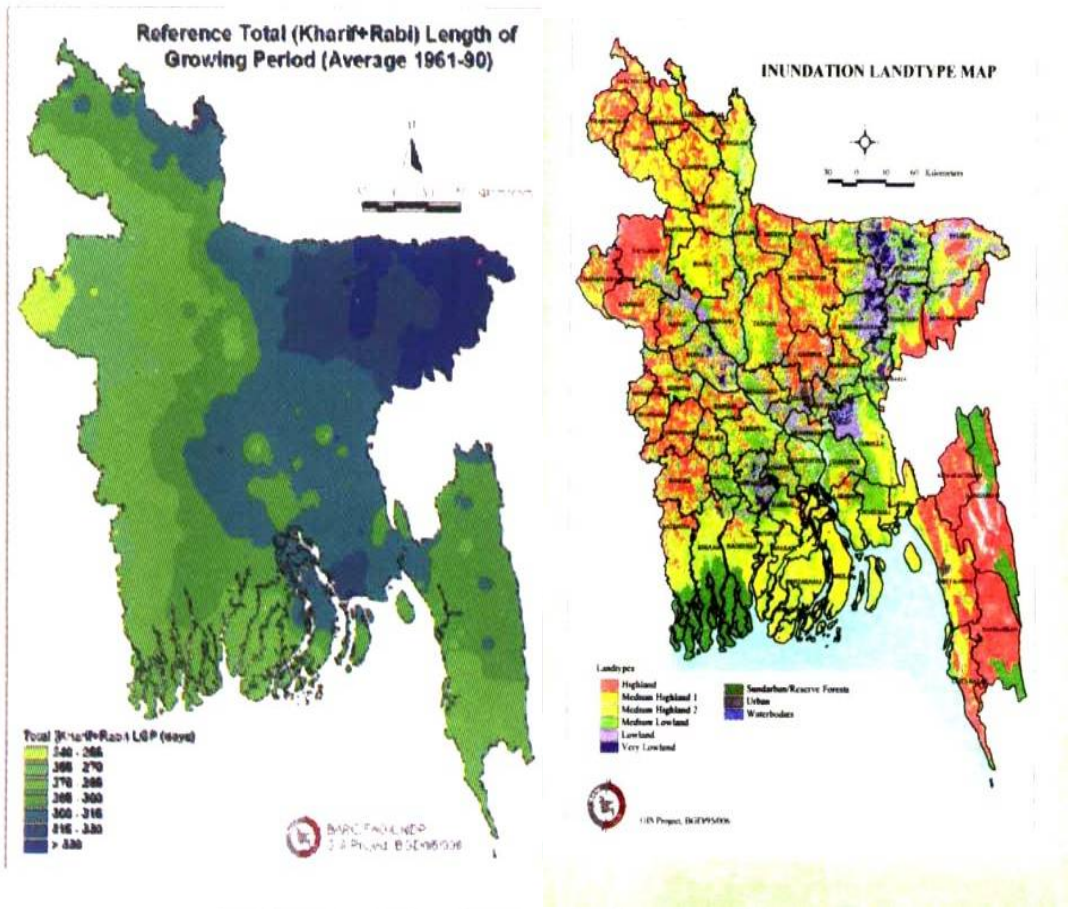

Figure 2: Study Area

B. Characterizing the Farmer Group

The major characteristics of the farmer group studied for identifying the constraints hindering agribusiness development in Bangladesh are presented here in a tabular form. The major criteria used for the purpose were farmer group such as small farmer and medium farmer; and age group were 2 such below 40 or above 40 of male and female gender.

Table 5: Major characteristics of the farmer group studied for identifying the constraints

Division	Age in years	Small farmer-male%	Small farmer-female%	Medium farmer-male%	Medium farmer-female%	Total
Dhaka	<40	23	8	17	3	51
	>40	24	11	9	4	49
Total		47	19	23	7	100
Chittagong	<40	17	7	20	2	46
	>40	23	12	13	6	54
Total		40	19	33	8	100
Rajshahi	<40	15	12	11	7	45
	>40	18	14	15	8	55
Total		33	26	26	15	100
Khulna	<40	17	9	14	8	48
	>40	22	7	17	6	52
Total		39	16	31	14	100
Sylhet	<40	21	6	16	4	47
	>40	19	8	17	9	53
Total		40	14	33	13	100
Barisal	<40	18	11	21	8	58
	>40	16	6	15	5	42
Total		34	17	36	13	100

The results showed that the small farmer and male farmer dominated the population which was selected randomly. While the age group proportion varied from 44 to 58%.

C. Identifying the Constraints Involving Farmer Group

The constraints of agribusiness development in Bangladesh were identified considering several sectors consisting 30 primary parameters which are given in the Table 5 below. The criteria selection aspects are mentioned in the methods and materials chapter and the detailed data are given in the appendices. However, the obtained data are presented and explained here in terms of production, pricing, processing and marketing.

I. Pricing of Commodities

Agreeing with the definition that agribusiness is a complex of interlinked activities related to the commercial production of agricultural crops, livestock, fisheries and forestry commodities, including its transformation and marketing, the results and situation as regards major constraints, potentials and recommendations for its development in Bangladesh are furnished here. The availability of accurate and reliable costs of production and crop budgets is a prerequisite for analysis of comparative advantage and competitiveness. Given the time limitations of the current study, it was not possible to collect primary data for all potential crop and livestock activities, even on a limited basis. Initial analyses relied on secondary data compiled from a variety of sources and updated using the latest available price data from DAM. These will be supplemented by collection of limited primary data to fill any important gaps. The main potential data sources identified were DAM, BIDS, BARI, BBS, and various Department of Agricultural Extension (DAE) projects including the Northwest Crop Diversification Project. The results obtained from this study as regards commodity pricing constraints and related aspects are given here. The result showed that the farmer respondent

scored 77% as highest for pricing constraints now active in Bangladesh creating problems against the development of agribusiness in the country.

Table 6: Identifying the agribusiness constraints by farmer respondents%

Sl	Factors Influencing Agribusiness	% responded
1	Improved technological knowledge	68
2	Laws: Policy, rules and regulations	41
3	Media Promotion: Print and electronic	64
4	Input Associations: Fertilizer, seed, pesticide	51
5	Education: General education	13
6	Training: Skill development	56
7	Research: Basic and applied	46
8	Extension: Agri-crops, livestock, fish forestry	57
9	Price: Trend, control, locality, reliability	77
10	Transport: Main and feeder	47
11	Storage: Govt., corporal and private	45
12	Marketing: Rural and urban	61
13	Post harvest: technology	62

Some of the factors which scored very less were to be the general education, agricultural higher education, civil administration etc which are also important to consider for establishing agribusiness in the country.

II. Agribusiness and Production Constraints

The results obtained from this study as regards production constraints and related aspects are given in the Table and fig. The result showed that the farmer respondent scored 68% as second highest for production constraints now active in Bangladesh creating problems against the development of agribusiness in the country. Agriculture and agribusiness were estimated to account for about 35% of GDP in 1999-2000, being about 40% ten years earlier. The most likely reasons as stated for this are the decline in relative importance of agriculture together with the continued reliance of most Bangladeshi consumers on non-processed basic own agricultural products. The reason was found to be the unreliable price changes in case of processed, imported and marketed products. Performance of agriculture over the past decade has been weak; the growth rate of agricultural GDP has averaged an annual rate of 2.4% versus an overall GDP growth of 5% and a growth of population of 1.48%. In recent years, agricultural growth has improved, reaching an average growth rate of 3.7% which is still below the overall GDP growth of 5.2%. Over the past decade, the most dynamic sub-sector has been fishery, due mainly to the shrimp sub-sector; however, in recent years, the fishery sub-sector has performed weakly. (Interim Poverty Reduction Strategy Paper, ERD 2002). At present, most agricultural production is concentrated on a limited number of crops, with rice occupying 82.6% of total cultivated area. While crops such as sugarcane or jute have seen their production stagnating or declining over the past decade, there has been increased production of spices and tea. In the non-crop sector, poultry, dairy and seafood have witnessed considerable growth. Farm size and production: The vast majority of farms in Bangladesh are very small. Out of more than 11.8 million farms as recorded in the 1996 Agricultural Census, about 50% of farms are less than one acre and 80% are less than 2.5 acres. Given trends toward land fragmentation, the future situation will be even more skewed towards smaller farms. During the inter-census period 1983-84 and 1996, the percentage of small farms (less than 2.5 acres) increased from 70% of total farms to 80% of

total farms. This situation is particularly discouraging since it is these crops that provide one of the potential sources of growth of agribusiness and value addition to agriculture.

Identification of Constraints by Agribusiness man Group

The results obtained from different studies within the piece of research are sequentially presented and described in this chapter. The major results are presented as identification of constraints, identification of potentials, general discussion followed by recommendations and highlight conclusions. The first and the most important objective of the study were to identify the major constraints the removal of which will ease the establishment and development of agribusiness in Bangladesh. The study was designed to survey through a pre-tested questionnaire to two groups namely:

c. **Farmer group:** Mostly farmers were selected from the small and medium group.

d. **Agribusiness man group:** Mostly Agribusiness men were selected from the small and medium group. The study areas covering 6 Divisions were below.

Study Areas

The areas selected for the study are given in the Table 1 below. It may be seen from the table that the study was conducted 23 Upazila of 22 Districts of 6 Divisions. The total number farmers involved in the study were 3340, the Rajshahi Division having the highest number 1105. This is due to the fact that the North West Crop Diversification Program (NCDP) with an agribusiness component was working in the area under the administration of Department of Agricultural Extension, Ministry of Agriculture.

Table 7: The agribusiness constraint study areas involving agribusiness man

Division	District	No. of Respondents Achieved
Dhaka	Dhaka	161
	Narayanganj	178
	Munsiganj	127
	Netrakona	122
	Gazipur	65
Divisional total		**653**
Rajshahi	Dinajpur	161
		122
	Rangpur	65
	Gaibanda	172
	Serajganj	193
	Pabna	129
	Joypurhat	248
Divisional total		**1090**
Chittagong	Feni	68
	Chittagong	134
	Coxs bazar	161
Divisional total		**363**
Barisal	Barisal	178
	Patuakhali	127
	Perojpur	122
Divisional total		**427**
Khulna	Jessore	65

	Jhenaida	172
	Magura	193
Divisional total		**430**
Sylhet	Habiganj	129
	Moulvibazar	248
Divisional total		**377**
	Grand Total	**3340**

A. The Major Characteristics of the Agribusiness man Group

The details of the characteristics of the randomly selected agribusiness man group involved in the study are mentioned here which are given in the Table 4. The criteria and categories of the farmers selected here also same as with farmer group selection though the site were found to vary according to the availability of business activities.

Table 8: Major characteristics of the agribusiness group studied for identifying the constraints

Division	Age in years	Small farmer-male %	Small farmer-female%	Medium farmer-male%	Medium farmer-female%	Total
Dhaka	<40	21	8	15	3	47
	>40	23	7	15	8	53
Total		44	15	30	11	100
Chittagong	<40	27	8	12	4	51
	>40	17	3	26	3	49
Total		44	11	38	7	100
Rajshahi	<40	27	10	11	3	51
	>40	26	6	15	2	49
Total		53	16	26	5	100
Khulna	<40	18	8	13	5	44
	>40	22	11	19	4	56
Total		40	19	32	9	100
Sylhet	<40	23	8	17	3	51
	>40	24	11	9	4	49
Total		47	19	23	7	100
Barisal	<40	25	6	18	2	51
	>40	29	5	13	2	49
Total		54	11	30	3	100

However a thorough check up of the table data shows that the male: female, age and divisional proportions greatly varied when compared to the data farmer group. Specially female agribusiness women were greatly less than female farmers in all divisions as given below.

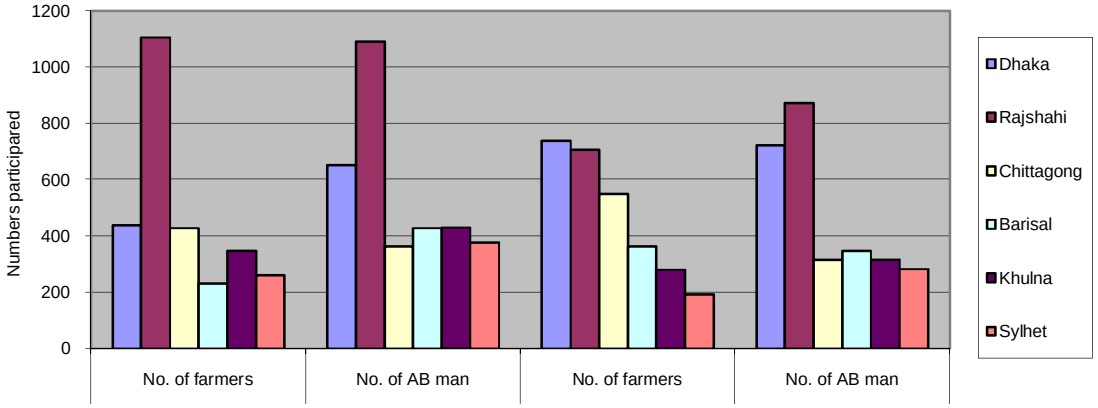

Figure 3: Agribusiness Constraint Study Areas Involving Farmers

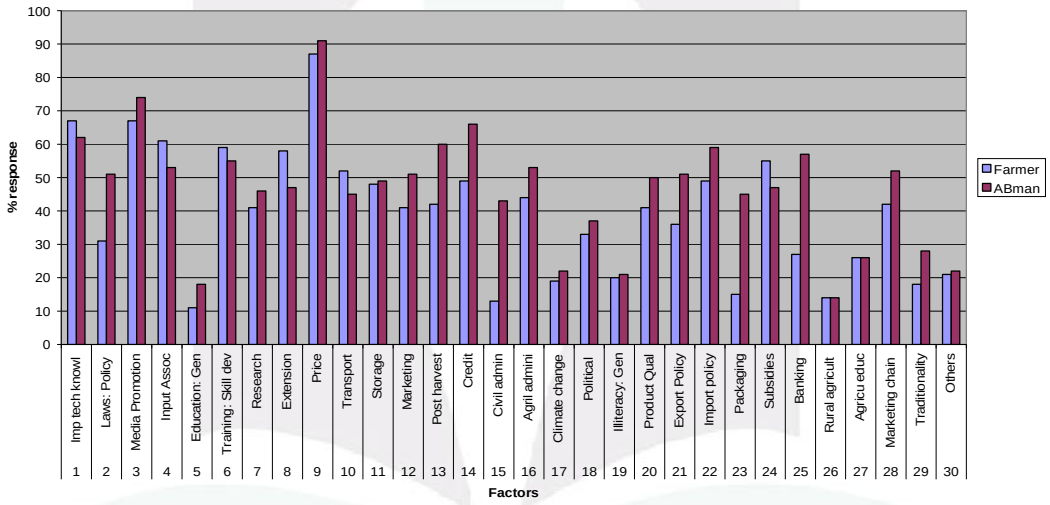

Figure 4: Identifying AB Potentials by Farmer and AB Man

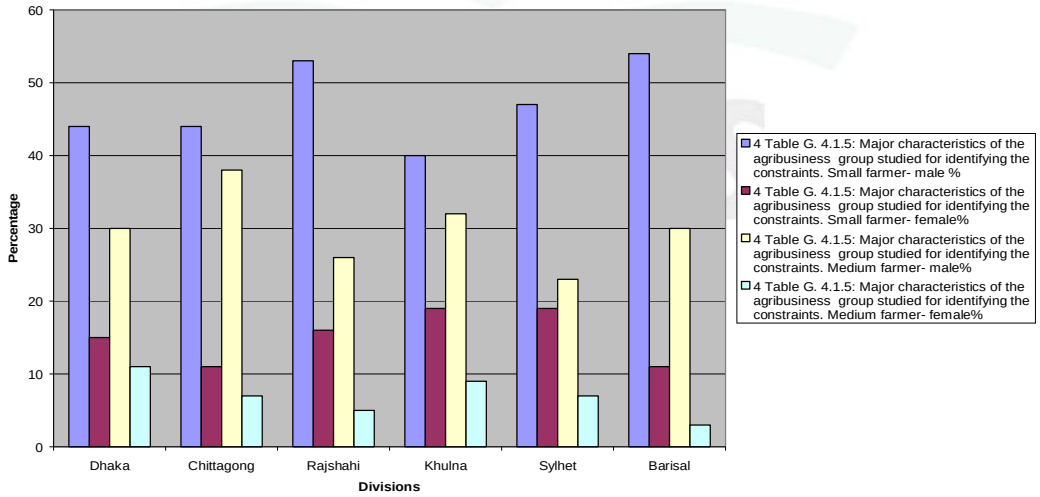

Figure 5: Major Characteristics of the Agribusiness Group Studies for Identifying the Constraints

B. Identifying the Constraints Involving Agribusiness man Group

The results obtained from the study as major constraints identified by the agribusiness man of different characters for different areas are presented here in the Table 2. The results show that out of the 30 parameters used in the study, the 3 parameters namely media promotion, improved technological knowledge and process of commodity scored first, second and third respectively by the agribusiness man. Business man always wants publicity for sale while they try to keep the price non-transparent, while the farmer score price of commodity as highest.

Table 9: Identifying the agribusiness constraints as prioritizing by the agribusiness man respondents %

Sl	Factors Influencing Agribusiness	% responded
1	**Improved technologies knowledge**	**66**
2	Laws: Policy, rules and regulations	53
3	**Media Promotion: Print and electronic**	**82**
4	Input Associations: Fertilizer, seed, pesticide	61
5	Education: General education	47
6	Training: Skill development	41
7	Research: Basic and applied	46
8	Extension: Agri-crops, livestock, fish forestry	35
9	**Price: Trend, control, locality, reliability**	**63**
10	Transport: Main and feeder	52
11	Storage: Govt. corporal and private	52
12	Marketing: Rural and urban	57
13	Post harvest: techs	42

Combined Response of Farmer and Agribusiness man on Constraints

The mean response of the farmer and the agribusiness man towards the identification of constraints are presented in the Table....The Table shows that the farmer and the agribusiness man responded differently on the parameters, but their responses were greater in cases of some parameters like media sector, pricing policy and improved agro technologies, which are briefly mentioned here.

SUMMARY

The Finding and Situation Based Outputs

The points highlighted by the most respondents are highlighted here. This has been found to be closely linked to the observations made by sectoral resource persons of the Agri-Invest 2003 by BARC-SEDF proceeding, GED and Planning Commission may briefly be mentioned. The agribusiness development potential should give more emphasis on improving price and regulatory environments, creating a contact point for agribusiness administration within MOA including the modality of establishing Agro-export processing zones, organizing agribusiness groups and association, foundation and federation activities, enhancing ICT and ATT research, development of agro-technologies and participation of rural peoples ensuring income generation.

Considering all the findings obtained from the appraisal and survey, studies, FGD, PRA, RRA. RPRA etc. from different groups, sectors, levels and professionals, the following points were found to be most important potentials for agribusiness development in Bangladesh.

1. Bangladesh continues to show improved economic growth, GDP increasing by 5.7% in 2005-06 and expected to increase in subsequent years.
2. With the GDP at current prices exceeding Tk. 3,500 billion, the agriculture sector continues to account for 23% of GDP.
3. It is positive as promotion of crop-based agribusiness is likely to benefit the poorer farmers as the suppliers of raw materials.
4. Production of maize and potatoes has increased significantly and these two crops may be reaching a take-off point where commercial production is a possibility.
5. The production of pulses, sugarcane, jute and tobacco may be increased developing sustainable agribusiness in the country.
6. Policies that have specific and positive immediate impacts to agribusiness development for example include the Price policy, Agro-technology transfer and ICT policies, NAP, the fish/livestock Policies as set out in the respective Action Plans and the Strategies, the Industry Policy, the Eximport Policies, the Land Policy, taxation policy and many other related policies.
7. The tax regime for promotion of agriculture and agribusiness is generally favorable with imports of raw materials taxed at a lower rate than imports of semi-processed materials, and processed commodities are taxed at the highest rate.
8. The import of commodities required for agriculture and agribusiness is generally free of VAT, which provides a further incentive to the sector.
9. Inconsistencies in the tax structure are being continuously eliminated by the Government, for example the import of equipment for the poultry and dairy industries has recently been exempted from customs duty and VAT which is expected to assist development of these industries.
10. Attention to identifying and resolving the underlying problems would undoubtedly have a greater benefit than increasing the policy distortions that try to favor agribusiness development.
11. Bangladesh is developing the capacity to comply with WTO requirements in areas such as the SPS and TBT Agreements.
12. Very recently a pilot agribusiness development program has been conducted through the NCDP project in the northwest region of Bangladesh, and a national level program namely Hortex Foundation have been initiated and worked in limited fields.
13. Steps taken by the government for price control helping development of Agribusiness.
14. Agricultural initiatives for dealing with agribusiness based agro-technology transfer by private/ NGOs producing positive effects despite desk-based BARC Projects.

RECOMMENDATIONS

There are numerous constraints to the development and growth of agribusiness enterprises in Bangladesh, as noted above. There are also, however, the constraints and the promising opportunities for the sector are discussed here highlighting most important issues. The agribusiness sectoral issues frequently mentioned by the different respondents and the comment they made in their explanation, and indicative recommendations made by sectoral persons are briefly mentioned here. The response in these matters of agribusiness development is similar giving emphasis on improving regulatory environments, creating a contact point for agribusiness administration, establishing Agro-export processing zones, organizing agribusiness foundation activities, enhancing research, development of agro-technologies and participation of rural peoples ensuring income generation. Considering all the findings obtained from the appraisal from different groups, sectors, levels and professionals, the following major points reflecting the agribusiness aspects are mentioned here in brief.

Agribusiness Development Perspective

i. Demand of the increasing population

In spite of widespread poverty, the mere fact that Bangladesh has a large population implies that a large number of household in the upper income brackets have a disposable income that allow them to be consumers in supermarkets. According to the Household Income and Expenditure Survey (HIES) of 2000, about 10% of the households have an average monthly income above $200. The current population estimate of 140 million would suggest that about 14 million people could afford to buy relatively high-quality products.

ii. Natural and comparative advantage

A number of agricultural commodities grown in Bangladesh appear to have at least some degree of comparative advantage. With a very few exceptions, however, this comparative advantage has not been translated into competitive advantage at the farm and firm levels. Among the commodities with export potential are shrimp, fish, jute, tea, vegetables and fruits (fresh and processed) and possibly herbs and spices and medicinal plants. While there is a growing, although still relatively small, export of vegetables, shrimp, jute and tea, they are the only commodities whose export potential have been exploited to some significant degree. However, in the case of shrimp, the volume of raw material available seriously constrains the degree to which the commercial shrimp processors can supply foreign markets.

iii. The NAP, NAEP and its Strategy of Implementation

a. Increasing agricultural productivity is presented as a more complex issue, requiring action in ten areas: Improved information of the trade-off between production and employment resulting from increased mechanization as a guide to future policy decisions;
b. Promotion of IPM/ICM/INM/IPNS with attention to its lateral spread from households that have received training;
c. Prioritization of the research agenda to identify those areas with greatest potential pay-off; including the responsibility of technology transfer by the scientist
d. Maintaining cereal self-sufficiency and increasing crop diversification;
e. Correcting technical distortions in input use efficiency in the concept of systems; and
f. Protecting the environment;

iv. Improving access for poorer farmers to formal credit representing a complex program of interventions with little indication of how it can be achieved.

Bangladesh has a long history of local and national industry associations. Many of the associations related to agriculture are said to be members of the Agribusiness Development Association of Bangladesh (ADOB) whose existence is still under doubt. A primary activity for the majority of these associations consists of serving as a mediator between their membership and local and national governments. Most of the associations provide very little in the way of business development services to their members. The associations do, however, represent a very important resource base for agribusiness enterprise development. Strengthening the capability of the associations to provide services to members and providing them with incentive and means to do so might be a more preferable approach for a donor-sponsored program than attempting to provide business development services to individual enterprises.

Media promotion: Production Agro technology Knowledge

Data from the 1996 Agricultural Census (Bangladesh Bureau of Statistics 1996) provide the most recent comprehensive information on farm holdings and characteristics by farm size. While there have undoubtedly been changes since the census, particularly in the poultry sector, it is highly unlikely that the main characteristics have changed significantly.

Of the 17.8 million holdings identified by the Agricultural Census, 6 million were classified as landless and marginal (or non-farm) holdings, having less than 0.02 ha of land, and 9.4 million were classified as small, 0.02 to 1.01 ha. These together represented about 86.5% of the holdings covered by the census. Of the remaining 13.5%, about 2 million (11.7%) were classified as medium, 1.01-3.03 ha, and only 300,000 (1.7%) as large, over 3.03 ha. The average cultivated area was 0.30, 1.47 and 4.25 ha for the small, medium and large holdings, respectively, while 8.8%, 5.4% and 5.0%, respectively, of the net cultivated area was dedicated to permanent crops such as fruit trees. Examination of the subdivisions within the small holding category indicates that the relative importance of permanent crops declines with increasing holding size. This supports the argument that perennial crops might be important for poverty alleviation. The demand for higher quality processed foods appears to be growing by at least 10% per annum. That demand is currently being filled primarily through imports. Import substitution would thus seem to be a promising area for the local food-processing sector. The establishment of local supermarket chains in Dhaka is a positive development, since growth of the supermarket sector has been a strong motivator of improvements in agribusiness production and marketing in a number of developing countries. For the purpose, crop diversification and even agricultural diversification should be done as experienced in NCDP through: i. standardization of goods, higher value addition, and improved model or design; ii. Adoption of modern technologies including use of computers and e-commerce through Agro-ICT.

Price and Pricing

With respect to the agriculture sector, the Minister outlined some of the specific steps recently undertaken to reduce agricultural production costs, including: reduction of the interest rate for agricultural loans to 8%. Waiving of interest on classified agricultural loans up to Tk. 5,000 and withdrawal of court cases against all concerned loanees, relieving about 1.5 million farmers of interest charges amounting to about Tk. 5 billion and making them eligible to obtain fresh financial help. Creating provision of 15-20% subsidy for electricity/ fuel consumption in irrigation and agriculture related activities were found to be highly beneficial. The cash subsidy paid through the banks on exports of agricultural commodities financed under LC has been increased to 25% produced mixed contribution which need detailed analysis as to the mode payment and the quality of the judging the project for finance. An increase of 20% in the disbursement of agricultural loans compared to last year, thus amounting to Tk. 35 billion in the year made similar opaque effects which were not at par with the national as regards production target and price of the commodities. Preparing for marketing through processing, pricing, storage and others Expansion of summer vegetable has been fairly dramatic, although the absolute areas remain very small. The area of eggplant appears to have expanded very rapidly, at an estimated 9.8% per year, about double the growth of other crops. However, examination of the underlying data reveals that the increase has been almost entirely due to the statistical adjustment made following analysis of the Agricultural Census data. As a consequence, these data should be treated with caution: while the area has doubtless increased, it is probably at a slower rate. Yields of summer vegetables have generally remained stable, or declined, with the result that production, which is estimated as the product of areas and yields has generally increased slower than area. A

similar pattern emerges for winter vegetables, which occupy a substantially larger area than summer vegetables. The area of eggplant again appears to be increasing rapidly, but this is due to a similar statistical adjustment. Otherwise the area of individual summer vegetables is increasing at 2-4% per year. However, in common with winter vegetables, yields appear to be stable or declining, other than for cabbage, so that production is growing slower than area. Overall it can be concluded that vegetable yields are well below their potential and as a result fail to provide farmers with the incomes they should reasonably expect.

Given the lack of success of the thrust sector program, the new Export Policy proposes a new system of "Sectors with the Highest Priority," a list that the government can add to or remove as required.

Controlling prices of commodities

1. Agribusiness entrepreneurs need to be linked as per price of commodities at different tiers.
2. The financial institutes and Banks should have mechanisms as regards their multidimensional capabilities so that they can control the market price and give support for sustainable agribusiness.
3. Information on commodity price and availability of business services should fit the local needs.
4. Grouping of agribusiness promoter/service providers to give common effort for price sustainability should to be strengthened keeping in mind the market chain management segments.
5. The policy environments for agribusiness development in the country should thoroughly work commodity grades or standards.
6. Education and training facilities for agri-marketing profession should be linked in curricular forms to government and University agencies, so that most people understand things in an integrated but similar way.
7. The number and type of business with price sensitive commodities should have provisions for regional review and revision in scheduled time.

B. Transferring Agro-Technologies through Media

1. Small-scale agro technologies need more attention of the policy makers.
2. The employment promoters should priorities labor intensive technologies.
3. Information on agro-technologies and availability of experts services need to be circulated in Medias those are within the reach of the first-line user beneficiaries.
4. Grouping of agro technologies with agribusiness items should give common effort for its transfer.
5. Creating favorable policy, legal and enabling environments for adoption of improved agro-technologies in the country.
6. Research and applied training facilities for technology transfer profession need to be strengthened.
7. The recommendation domain for agro-technologies and related commodities and potential areas should be identified regionally for Agro-Processing Zones need to be established.

Supporting Agribusiness through Media

1. Media should give priority to technologies suitable for small-scale agribusiness entrepreneurs and produces/ processors.
2. The information stated media for a commodity promotion should include the financial involvements: its scopes and solutions.

3. Information on agribusiness scopes, systems, facilities, and availability of technical services should state and broadcasted.
4. Grouping of agribusiness associations should have scope for giving common effort for advertisements.
5. The favorable media environments through policy and legal reforms should be made integrated considering the technical knowledge of the farmer beneficiaries.
6. Training for media professionals by the Government, Universities and its agencies need to be done under the care of Agribusiness associations/ foundations.

Recommended National Agribusiness Model Media Guidelines

1. All agribusiness entrepreneurs need to be linked functionally.
2. The financial institutes, Banks and employment programs should give all type support for agribusiness in an integrated way.
3. Information on agribusiness scopes, systems, facilities, and availability of expert's services for an agro- technology should be included in the recommendation patent or package.
4. Grouping of agribusiness associations to give common effort for agribusiness development.
5. The favorable policy and legal environments creation for agribusiness development in the country should be thoroughly reformed with the direct participation of agriculturists and producers.
6. Education, research and training programs must include the agribusiness model development guidelines in the curriculum and syllabus.

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