



Studies on the Agribusiness Problems, Post Harvest Parameters of Horticultural Crops and Business Strategies in Bangladesh

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ABSTRACT

The field survey was conducted among the farmers, researchers, extensions and agribusiness personnel to assess their knowledge about National Agricultural Research System (NARS) recommended technologies on pre- and post-harvest management and their economic impact in Bangladesh. The survey was conducted in 16 Upazilas of purposively selected eight (8) districts based on agricultural project activities on potential of major crop groups and system through a standard pre-tested questionnaire. From the field survey, it revealed that only a few number of technologies were available at field level regarding pre and post-harvest management out of more than 300 NARS recommended technologies. There was also found a big knowledge gap among farmers; researchers and other respondents. Considering all technological categories, perceptions of researchers on NARS recommended technological knowledge were found much higher than farmers, extensions and agribusiness personnel. There was also a big Knowledge gap between project intervention districts than less or zero project intervention Districts. It was also observed that most of the respondents were very much aware about the rice based technologies rather than other crops; especially most of the small scale poor farmers were interested to use cheap, easy handling and locally available technology for their crop regarding pre and post management at field level.

Keywords: *Pre- and Post-harvest, Agricultural Pest, Economic Impact, Bangladesh*

INTRODUCTION

Agriculture is the oldest profession of human being. Agricultural production is the basic and primary production sector where the world life system became established. The community life of human initiated with the exchange of agro-commodities within families/groups which was marked as the milestone of the event BUSINESS. Agricultural products are the mother commodity of business. In the concept, as agricultural products are still occupying the major portion of the business being the first throughout the world, all the business originated its importance from the agriculture base. Any synthetic commodity may be produced anywhere in the world, but agro-commodities must be produced from raw materials which are ecology based. Thus the agribusiness which means production, transformation and sale of agro-commodities interlinked the whole world for its business giving it very high significance internally for the survival of the human being even for the time to come.

Agribusiness throughout the world as presently growing is a very highly developed phenomena especially for the developing countries. Bangladesh being an underdeveloped country is still lying far behind the global agribusiness system in many ways. But due to present global free market concept there is no scope to be isolated from the system. All its resources, production and processing techniques and marketing potentials must enable the requisite environment. The proposed project is consistent with the poverty reduction strategies of GOB and ADB who recognized that the development of viable agribusiness enterprises is essential for poverty reduction in the rural areas. The latest ADB Country Strategy and Program Update (2005-2006) stressed the need to “transform agriculture from a subsistence to a commercial orientation and promote agribusiness development” as a means to improve the livelihood of 76% of the country’s population and about 85% of the poor.

The experiences and outputs from ADB and other donor's project in agriculture, micro and rural finance, horticulture, aquaculture, and livestock sectors in Bangladesh and other countries have given a very sound rationale for implementing the agribusiness development Project in Bangladesh. These are:

- i. The sustainable development of business oriented commercial agriculture is highly dependent on private sector participation, but much more needs to be done for processing and extension (ADB 2001). The experience in successful development of agribusiness in India (Assam), Kenya and Thailand (Van Roekel et al. 2002) is adoptable here.
- ii. Enhanced private sector roles in agricultural input and output markets are crucial for realizing the agricultural production potential, increasing private demand for commercial credit has been endangered by market liberalization, yet the NCBs are not prepared to serve the emerging needs of agriculture (ADB, 2004).
- iii. The outreach of microfinance institutions and microcredit programs by the NGOs has more than the public sector Banks, but they still need support to meet the need of an important segment of rural entrepreneurs, i.e. 'the middles'.
- iv. Channeling a credit line through the Banking system requires examination of the capacity of the Bank and NGOs to act as financial intermediaries, the credit line should provide flexibility to Banks and NGOs in setting interest rates to reflect credit risks of the respective clients; there should be operating guidelines for the recycling of sub loan repayments; and the use of credit facility for such recycling should be monitored to prevent uses for purposes other than those intended by the project.
- v. The high cost of and limited access to capital of small business, and the prevalence of rural unemployment have impeded the ability of smallholders to capitalize from agribusiness, the challenge in the sector being to increase its competitiveness in a free market economy increasing employment.

OBJECTIVES OF THE STUDIES

The main goal of the research is to reduce the poverty in Bangladesh enhancing agribusiness growth, generating employment and income in the rural areas.

The major objectives as may be straight way mentioned are:

- i. To identify the main problems of Agribusiness in Bangladesh.
- ii. To know the Post harvest parameters to be prioritized in Agribusiness
- iii. To identify the business to be prioritized in Agribusiness

METHODOLOGY

The methods and materials used here to conduct the study are broadly discussed in this chapter formulated as per objectives such as to: Identify the main problems of Agribusiness in Bangladesh, know the Post harvest parameters to be prioritized in agribusiness, and identify the business to be prioritized in agribusiness.

Approach Methodology

The whole study will be accomplished under 3 components, such as: 1. Identifying agribusiness constraints, ii. Identifying agribusiness potentials, and iii. Recommending solution. In general, the research plan will be administered in a comprehensive way as each component and sub-component of activity involves multiple factors. The general approach and methodology to achieve the specific project outputs performing the packages and component-based research activities are briefly furnished below sequentially.

The detailed methodology to be adopted to provide assistance and support for realizing the goals and objectives of the study will include thorough analysis of the works to be done. The methods and materials of the study will be meticulously considered in relation to the practical situation and the needs and modes of interventions. The design of the research essentially demands a rigorous field activity and technically oriented procedure entailing focus on agribusiness growth that generates income and employment in rural areas.

Based on the planned activities mentioned above the innovative perception needed for the detailed approach to the work are described in the following sub-sections:

- i. Collection and review of data, reports, information etc.
- ii. Survey, studies and need assessments
- iii. Reconnaissance field visit and strategy formulation
- iv. PRA/RRA/RPRA/FGD/Participatory Process

It is highly expected that the innovative approaches will be down-loaded to the detailed methodologies to combine to a complete mechanism of technical activities and will produce the desired outputs of the research as stipulated.

Visits for Appraisal

Visits will be made to study sites covering fields and offices including agribusiness entrepreneurs.

The Purpose of the visit

- i. Met and hold discussions with the concerned persons agribusiness associations and entrepreneurs, individuals and farms.
- ii. Exchange views with a cross-section of the prospective beneficiaries to know their present socio-economic conditions as well as their expectations out of the project;
- iii. Collect information that would give an insight into the current status and plans for BADP development; and
- iv. Study initial development and progress of the activities of BADP and pilot agribusiness development component of NCDP in the visited areas.

Agribusiness is a multidimensional activity involving many types of products and persons organized in the forms of companies, single enterprises, and corporal bodies at various stages of commodity processing. It involves national and international policies, regulatory processes and enabling environments. Thus, the agribusiness development program in any country must be based on the local commodity and capacity development needs, existing resources and environment, and product standard demands. In way of reviewing the needs for developing the agribusiness development project in Bangladesh, several steps as mentioned here are taken during preparation of the approach and methodology. The steps taken were:

- a. Collection of names of Agribusiness farms/orgs and individuals.
- b. Knowing the present status of management of their establishments.
- c. Assessing their potentials and future needs.

Data, Reports and Information

In addition to the list of data and documents mentioned elsewhere, the following data, reports and documents will be collected at the auspices of the DAM/NGOs/ Banks etc.:

- i. Relevant secondary data form BBS/DAM/DAE/BB
- ii. Documents related to DAM activities/ADB Appraisals on BADP
- iii. Reports of the NCDP (ADB) and ATDP (USAID) and others
- iv. Various maps, satellite imagery and audio-visuals relevant to NCDP.
- v. Agro-ecological zones, farming systems and socio-economic data of the area.
- vi. Detailed data, information and reports of HORTEX Foundation; Training Institutes, NGO Facilities.
- vii. Agricultural and other census reports.
- viii. Rural credit activities and performance of Banks.
- ix. NGO activities, programs and micro-credit situation.
- x. National Agricultural Policy and NAEP Documents and other related policy papers.
- xi. Reports of Farm to Market Enterprise Development (FMED) Project (CIDA).
- xii. Reports on rural markets, marketing facilities and fariahhs /aratdars/paikers etc.
- xiii. Review of the Baseline Survey Report and/or PRA Reports.
- xiv. Neighboring countries agribusiness related useful documents

Surveys

Prior to launching of the implementation study program it is usually necessary to conduct a baseline survey focusing on the socio-economic status and agribusiness includes market management system for SME covering:

- i. NAS for Agribusiness Associations;
- ii. Small Scale Farmers Technological NAS, & FINA etc.
- iii. NAS for market management and information dissemination.
- iv. Training Needs Assessment (TNA) for MOA, MOFL, and DAM staff, Small Scale entrepreneurs and agribusiness associations, NGO Workers, Banks staff and others;

Collection and Review of Data, Reports and Information

Reports and documents will be collected at the auspices of the DAM/NGOs/ Banks etc.

Surveys, Need Assessments and Studies

Prior to launching of the implementation action programs it is usually necessary to conduct a baseline survey of the project area focusing on the socio-economic status and agribusiness including market management system by small scale farmers. This is essentially required in such development projects so that the impacts or results of the project interventions can be compared with the base situation, and achievements can be evaluated to measure the success rate or failure of the project. Field research and technical studies will also be required to address the problems of agribusiness growth by the entrepreneurs especially the women focusing mostly marketing, agro-processing and other rural enterprises and farming systems. Studies may also be conducted in rural credit sector entailing micro-credit effectiveness and legality of NGOs/MFIs with regulatory framework and formal linkage with scheduled banking sector (BB and other commercial banks).

Composition of the study population

The composition of the study population studied in this research is mentioned here. The number of respondents finally studied was minimum (100).

1. Categories were:
 - a. Farmers
 - b. Experts
 - c. Managers
 - d. Directors
 - e. Scientists
 - f. Others

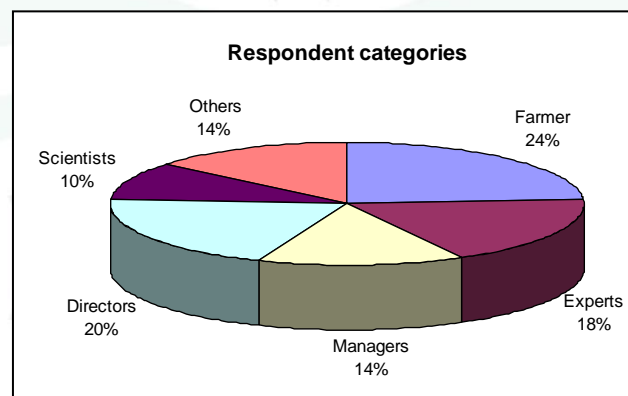


Figure 1: Percent of Respondents as per Categories

2. Gender – Male: Female 81: 19.
3. Qualification-<12: >12-23; 77
4. Experience-<20 :> 20 yrs-36: 64
5. Age group: <50 :> 50 -48:52

Table 1: Composition of the study population as random example

SI	Designation	Age yrs	Gender	Qualification	Experience yrs
1	Horti-culturist	45	M	M. Sc. Ag.	20
2	PD	54	M	B. Sc. Ag. (Hons.)	32
3	PDP	50	M	M.S.	20
4	HD Officer	50	M	M. Sc. Ag.	18
5	PSO	41	M	Ph D	14
6	AD	38	F	MA	11
7	MD	56	M	PhD	30
8	CSO	49	M	Ph D	23
9	DD	45	F	Ph D	12
10	DD	43	M	PhD	15
11	DD	42	F	B.Sc. Ag. (Hons.)	14
12	PD	25	M	M. Sc. (Ag.)	25
13	Manager	56	M	M. Sc. (Ag.)	15
14	DD	40	M	PhD	13
15	AGM	56	M	M. Sc. (Ag.)	32
16	AGM	53	M	M. Sc.	32
17	Mang. Expert	53	M	PhD	20
18	Eval. Expert	59	M	M. Sc. (Ag.)	34
19	Logistic Expert	48	M	PhD	22
20	Team Leader	52	M	MBA	27
21	Expert	58	M	PhD	30
22	Expert	45	M	MBA	20
23	Farmer	40	M	M. Sc.	12
24	School Teacher	53	M	B.A	21
25	Farmer	51	M	Class Five	23
26	Farmer	40	F	H.S.C.	15
27	Farmer	33	M	S.S.C.	15
28	Farmer	43	F	1.A	24
29	Farmer	40	F	Class Seven	18
30	Farmer	47	F	B.A.	22
31	Farmer	35	F	S.S.C	18
32	Farmer	53	F	B.Sc.	22
33	Farmer	40	M	H.S.C.	14
34	DAD	59	M	Ag. Diploma	34
35	AGM	59	M	M. Sc. Ag. Eco.	22
36	Manager	56	M	M. Sc. Ag. Eco.	23
37	PD	51	M	B.Sc. Ag.	16
38	PP Officer	41	M	M. Sc. Ag.	14
39	Farmer	47	M	Class Seven	18
40	Farmer	36	F	Class Five	14
41	Joint Director	48	M	M. Sc. Ag.	12
42	PD	48	M	M. Sc. Ag.	15

RESULTS AND DISCUSSION

The results obtained from the studies are presented and discussed in this chapter.

The results are presented here in the forms of tables and graphs. The results are interpreted here under the headings of:

1. Problems of Agribusiness in Bangladesh
2. Techno-economic parameters of Post harvest studies
3. Crop or its step of business

Problems of Agribusiness in Bangladesh

The first and the most important objective of the study was 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. The results obtained from the study as regards identification of problems of Agribusiness in Bangladesh are given below in tabular and graphical forms.

Table 2: Number of respondents stating problems of Agribusiness

a. No market Streaming	b. No Processing Center	c. No Costing pricing	d. Exim-porter unknown	e. Price Un-controlled
36	36	12	16	26

The results show that no market streaming and lack of agro-processing centers scored highest by the respondents, the costing pricing was found to be least responded as they do not know the point as there is no national provision or program for the purpose.

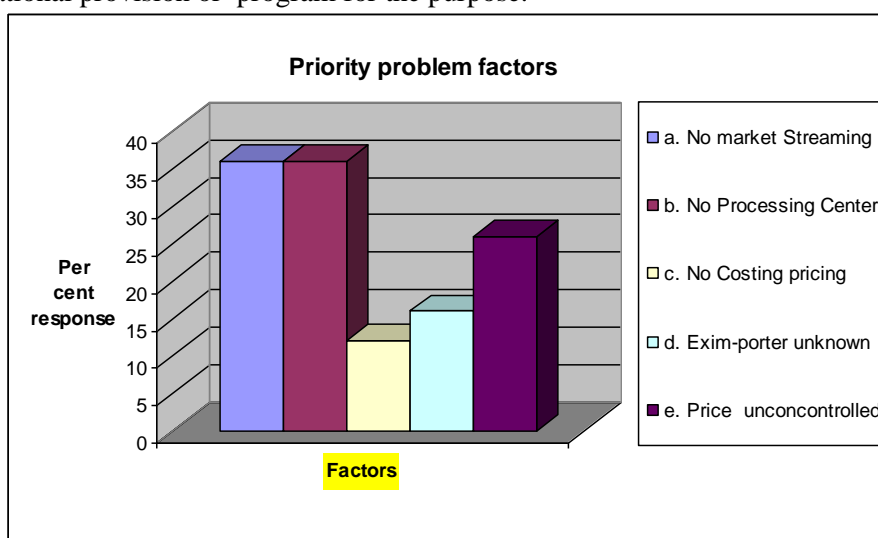


Figure 2: Problem Factors Prioritized by the Respondents Relating to Agribusiness

The no market streaming and lack of agro-processing centers scored 28% each the least being 10 % for no costing pricing. The problems prioritized by the respondents show that the absence of central streaming market channel and lack of processing centers scored equally 36. The lowest scored was no costing and pricing commission. The respondent reported that they were not aware of such authorities and also they do not know the importers or exporter and the functions and responsibilities of such organizations were not clear as regards their business interest.

Cost and Pricing

With respect to the agriculture sector, 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 Tk5,000 and withdrawal of court cases against all concerned loanees, relieving about 1.5 million farmers of interest charges amounting to about Tk5 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. Thus it seemed very much important to set up agrotech based suitable price commission for bringing about integrity in the price of commodities over a minimum reliable time so that the entrepreneurs can base to found a business with less risk. Small-scale agribusiness entrepreneurs are scattered throughout the country without being professionally linked. The total number, type and volume of business are not specifically known. All these are need to be worked out in favour of developing a uniform and 3-5 year durated stable pricing having a maximum of 10% within the stipulated period.

Cost Related Factors

Table 3: Cost related factors

a. Total cost-Production + processing	b. Processing cost	c. Prod + Promo+ makt cost	d. Adl tech + input costs	e. Capital est. costs	f. Others
23	22	28	31	20	3

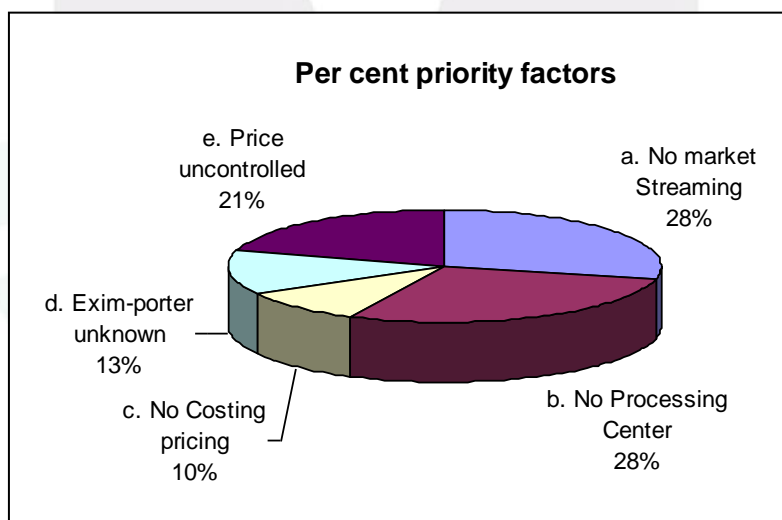


Figure 3: Percent respondents stating problems of Agribusiness

The FGD showed that due to lack of market channel and processing center the producers loiter in dispersed rural markets finally getting no fair price comparison to their cost of production.



Figure 4: The nature of the rural vegetable market studied in detail

The producers seem helpless as regards marketing channel or at least partial processing so that they can preserve it few days.

Techno-economic parameters of Post Harvest Studies

Analytically what have been found from the study may be plotted as prioritized in the model below: An integration of the promotion and marketing under the dominance of production factors

The Agribusiness factors prioritized The Agribusiness factors prioritized by the respondents show that the additional suitable technology and its inputs costs scored highest being more than 30 followed by Production cost + promotion cost+ marketing costs. The lowest scored was no costing and pricing commission. The respondent reported that they were not aware of government incentives and also they do not know the agribusiness field staff or exporter companies and the functions and responsibilities of Agricultural Extension organizations as regards their business credits. The results indicate that in the form of percentage, the additional technology and its inputs as a single factor scored 25% priority, followed by production plus promotion plus marketing costs being 22%.

Techno-economic knowledge

The results collected and processed in the study to identify the constraints relating the production technology constraints are briefly mentioned in the Table. It may be seen from the results that the farmer and agribusiness man respondents scored lack of suitable training (74%), lack of proper technology transfer process (65%) and lack of hand skill (64%), as first, second and third level constraints behind agribusiness development in Bangladesh. the production technologies lacking in this regard are found to be related to cropping systems/cropping pattern and specially of crop diversification. The crops and horticulture sub-sector, which represents around 60% of agricultural GDP was expected to increase by around 3.2%, thus providing a major contribution to the slow growth rate of the overall sector. Based on preliminary information it appears that the major driving force behind increased crop and horticulture production was increased output of cereal crops. Total cereal output was estimated to increase by 1 million ton from 25.9 million t in FY 2001-02 to 26.9 m t. However, this represents a return to the earlier trend after the relatively poor boro rice harvest of the previous year. While potato production has shown remarkable growth, from about 1.5 million t in FY 1997-98 to 3.5 million t in FY 2002-03, its contribution to GDP remains relatively insignificant compared to cereals. While jute production increased in FY 200102, it returned to the long-term declining trend in FY 2002-03. Output of the minor crops, which equate largely to horticultural or high value crops, remained close to the previous year's level, accounting for about 20% of the crop sub-sector. Although there has been considerable emphasis on crop diversification, Bangladesh agriculture continues to be oriented towards rice production, and even exhibits an increased concentration in this sub-sector. The production of pulses, sugarcane, jute and tobacco has been static or declining due to reductions in the areas of the crops and/or poor yields. Overall crop yields remain well below their potential levels. Thus diversification of crops ensuring its prices

fulfilling the interest of the farmer and the business need prior consideration in the way of agribusiness development in Bangladesh.

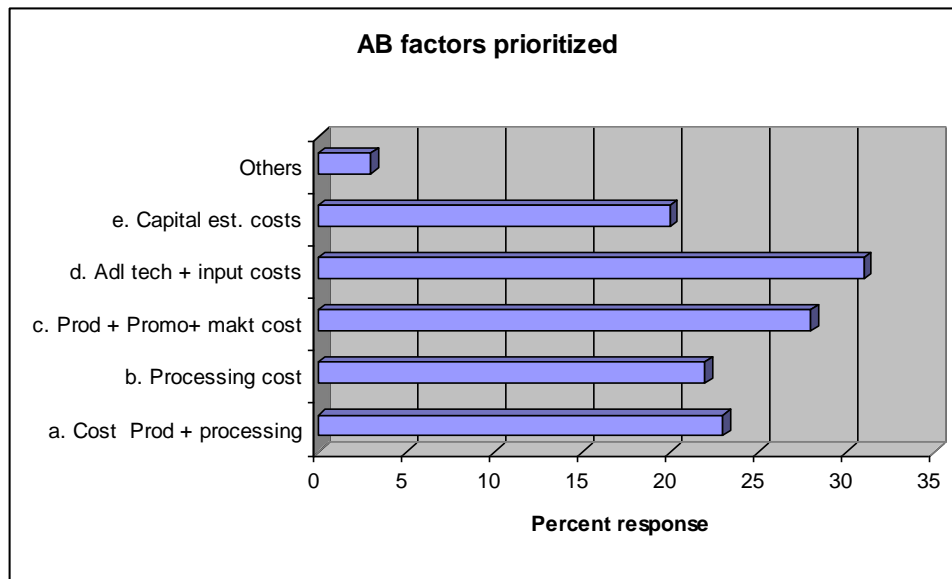


Figure 5: Costs of Production and Processing

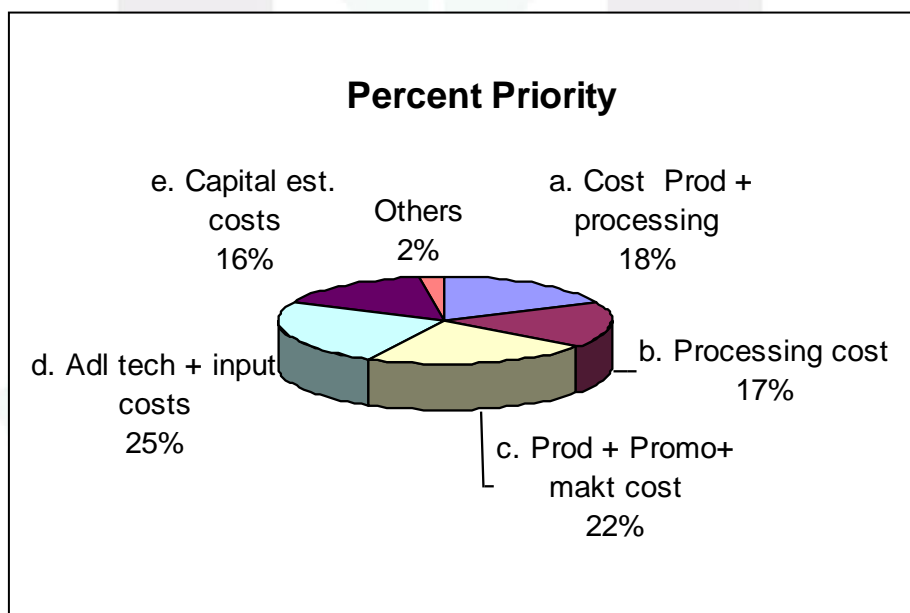


Figure 6: Percent Priorities given by the Respondents on Different costs

Crop or its Steps of Business

The results given here in tabular and graphical forms show that the respondent scored highest on the costs of production, processing and marketing as 39, the least being the performance of Associations, trustees and Foundations.

Table 4: Response on the Agribusiness steps including services

Hort/field/ plantation	Prod /Proces/Makt	Subsidy/Service/F inance	Educ/Train/O rient	Assoc/Trust/ Found
42	39	26	16	5

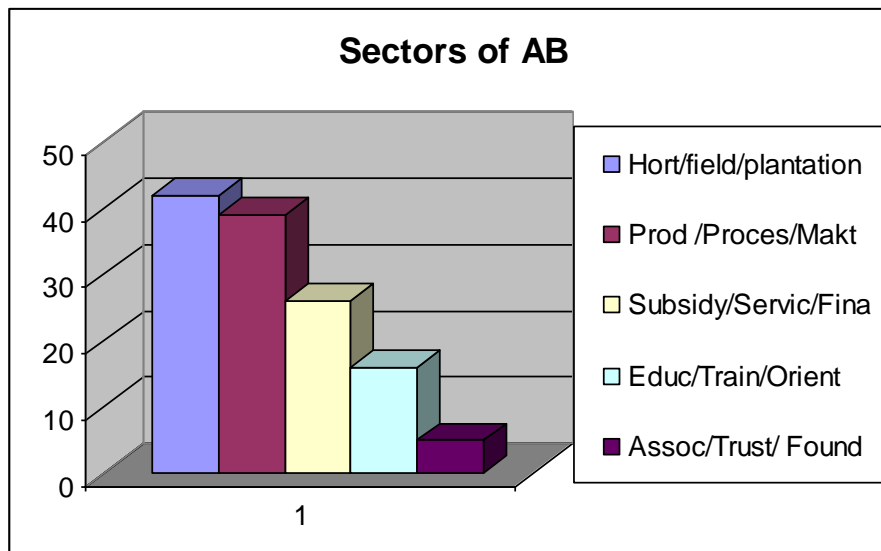


Figure 7: Response on the Agribusiness steps including Services

The agribusiness sector is still a small sector, with a limited number of farmers, traders and processors who could claim to be fully commercially oriented. In the most recent years, however, an agribusiness sector has emerged in a few areas including poultry, shrimp, fruits and vegetables, dairy, wheat and bakery products, medicinal plants, feed and flowers.

Other commodities and products including tea, sugar, jute and tobacco have been part of the commercial system of production and distribution for a longer time; these sectors have not yet shown the dynamism of the first groups of commodities and products, partly due to continuing presence of inefficient State-Owned Enterprises (SOE) (e.g., jute and sugar). The largest agricultural sub-sector, namely rice, is still mainly dominated by a large number of farmers producing for self-sufficiency or producing small marketable surplus. The promise of identifying niche markets in aromatic quality of rice is still largely unfulfilled, even though some processors are trying to improve the milling, packaging and distribution capacity.

It may be mentioned here that the predominance of small-scale units in production, processing and distribution and the lack of a well-organized system linking production to the market control the agribusiness of the country. Contrary to common opinion, the small scale of farms is not necessarily the main reason for the low level of agribusiness development in the country. Other countries in Asia such as Indonesia and Viet Nam, with a similar farm structure, have been able to achieve considerable development in agribusiness. The most serious problem of the agribusiness sector in Bangladesh seems to be the weakness of linkages among farmers, traders, processors and service providers. Development of agribusiness in Bangladesh will imply the strengthening of these linkages in order to increase the number of stakeholders able to generate higher value and improved quality of agro-based products. Given the importance of agriculture for the Bangladesh economy, characterized by a large rural population engaged in agriculture on increasingly fragmented landholdings, agribusiness provides an opportunity to reduce poverty through business development and generation of larger value added. Moreover, the development of agribusiness could also have a considerable impact on women engaged in agriculture production, cottage and small-scale agro enterprises and agro-processing establishments. For example, PRAN, arguably the most successful Bangladeshi private agribusiness group, reports that women represent more than 80% of the labor force in its processing plants.

Bangladesh is found to be an importer of commodities that are needed for value addition prior to export to consuming markets, which make price very unstable. Imports from other countries including neighbors are estimated to comprise of equal proportions of agribusiness and non-agribusiness commodities, while exports are about 70-80% agriculture and agribusiness. This

creates a problem of trade unbalance and also causes compromise of agribusiness commodity prices for non-agribusiness commodity prices. The import of commodities required for agriculture and agribusiness is generally free of VAT, which provides a further incentive to the sector discouraging domestic agribusiness development. 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.

The emphasis on increased subsidies and incentives, forgiving of overdue loans and controlled interest rates for agricultural credit is likely to have little impact on developing a commercialized agriculture sector. 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. The availability of accurate and reliable costs of production and crop budgets is a prerequisite for analysis of comparative advantage and competitiveness. Initial analyses relied on secondary data compiled from a variety of sources and updated using the latest available price data from DAM. 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.

FINDINGS

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, RPRRA 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.

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.

A. 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

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.

National Agribusiness Model 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.

SUMMARY

The summary of the studies done and the suggestive recommendation on the findings and situation basis (FSB) are briefly mentioned here sequentially. As per objective of research, the summary and recommendations are mentioned i. identification of constraints, ii. Identification of potentials and the

final iii. Recommendations given for agribusiness development in Bangladesh. The major constraints and potentials highlighted by the respondent are:

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.

RECOMMENDATIONS

Considering all the agribusiness constraints and potentials analyzed, explained and summarized above, the following points mention may be as prime suggestions which will lead to formulate practical recommendations for the development of agribusiness 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. With the GDP at current prices exceeding Tk 3,500 billion, the agriculture sector continues to account for 23% of GDP. Sustainability of product price can ensure this development through a most capable multidisciplinary Agro-tech commission working in the concept of domestic Agro-commodity is the base of all other activities.
2. 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, **non-uniform method of GDP calculation**, decline in relative importance of agriculture together with the continued reliance of most Bangladeshi consumers on basic agricultural products. **In the context calculation methods of GDP over years need rigorous review as done in other agro-based countries of the world.**
3. Although there has been considerable emphasis on crop diversification, this should be more strengthened involving agribusiness in the farming system because the crop-based agribusiness is likely to benefit these poorer farmers as the marketing of raw materials and products in the market chain management.
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 but it is only possible through price stability, increased productivity transferring improved technologies and agro-technical compliance of agriculture ICT.
5. The production of pulses, sugarcane, jute, tea and tobacco need closer attention in respect of Eximport policies and prices, research back up education and training.
6. While Bangladesh has a wide range of but a specific agribusiness policy for government departments is a must for looking after AGRIBUSINESS for the, by the AGRICULTURIST'S.
7. Policies that have specific relevance to agribusiness development include the NAP, land and soil policies, input-output policies, and eximport policies.
8. The tax regime for promotion of agriculture and agribusiness is should be favorable taxed with a lower rate for semi-processed materials, and processed commodities of domestic origin.
9. The import of commodities essentially required and correct supplement to domestic agriculture and agribusiness may be free of VAT, which provides a further incentive to the sector.
10. Inconsistencies in the tax structure are being continuously eliminated by the Government regularly.
11. 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.
12. The response in these matters of agribusiness development is similar giving emphasis on improving regulatory environments, creating a contact point for agribusiness administration within MOA, establishing Agro-export processing zones, organizing agribusiness groups and association 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 points will be tried to reflect in the research activities and methodologies.
13. The points highlighted by the most respondents and the comment they made in their reports, and summary recommendations made by sectoral resource persons of the Agri-Invest 2003 by BARC-SEDF proceeding, GED and Planning Commission may briefly be mentioned as follows.

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