

**INTERIM EVALUATION OF
AGROBASED INDUSTRIES AND TECHNOLOGY
DEVELOPMENT PROJECT**

USAID, DHAKA

MARCH 25, 1999

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ANNEXES

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ACRONYMS USED

ACF	Agribusiness Credit Fund
ACI	Advanced Chemical Industries

ACFDF	ACF Development Fund
ADB	Asian Development Bank
APO	Assistant Program Officer
ATDP	Agrobased Industries and Technology Development Project
BADC	Bangladesh Agricultural Development Corporation
BAPA	Bangladesh Agroprocessors' Association
BCIC	Bangladesh Chemical Industries Corporation
BIDS	Bangladesh Institute of Development Studies
BKB	Bangladesh Krishi Bank
BRAC	Bangladesh Rural Advancement Committee
BSCIC	Bangladesh Small and Cottage Industries Corporation
CoP	Chief of Party
CMS	Chinnomul Mohila Samity
DAE	Department of Agricultural Extension
DLS	Department of Livestock Services
EPB	Export Promotion Bureau
ESP	Enterprise Support Program
FAO	Food and Agriculture Organization
FDI	Fertilizer Distribution Improvement
EGAD	Economic Growth and Agricultural Development
FY	Fiscal Year (July 1-June 30)
GDP	Gross Domestic Product
GoB	Government of Bangladesh
HQ	Headquarters
HYV	High Yielding Variety
ICLARM	International Center for Living Aquatic Resources Management
IFDC	International Fertilizer Development Center
INFOMAT	Information on Markets and Technology
LoP	Life of Project
MACH	Management of Aquatic Eco-systems through Community Husbandry
MATT	Market Access and Technology Training
MIS	Management Information System
MoA	Ministry of Agriculture
MoC	Ministry of Commerce
MoI	Ministry of Industries
MoP	Muriate of Potash
NAPL	National Agri Product Limited
NBR	National Board of Revenue
NGO	Non-Government Organization
PABA	Program for Assistance to Borrowers from the ACF
PAGE	Poverty Alleviation, Gender Equality and Environmental Development
PCB	Participating Commercial Bank
PP	Project Proforma
RAKUB	Rajshahi Krishi Unnayan Bank
STAMP	Support for Technology Acquisition and Mastery Program
ToR	Terms of Reference
UMB	Urea Molasses Block
USAID	United States Agency for International Development
USG	Urea Super Granule

Acknowledgement

The evaluation team greatly appreciates the cooperation and effort put in by all those who were interviewed. Despite their busy schedules, they gave us full support. We thank them for the frankness with which they spoke and for their accommodation of all the questions we asked. We are grateful to Economic Growth and Agricultural Development (EGAD) Team, USAID for advice and support. The Team also appreciates the cooperation of ATDP staff, both in the headquarters and field, in providing relevant information and assistance.

The conclusions and recommendations given in this evaluation report were considered appropriate at the time it was prepared. These may be modified in the light of further knowledge gained at subsequent stages of the implementation of the ATDP project.

Comments received from MoA and IFDC on the draft report have been presented in Annexes XVIII and XIX in their entirety. Selected comments are incorporated in this final version of the evaluation report.

EXECUTIVE SUMMARY

The Agrobased Industries and Technology Development Project (ATDP) is a five year project of the Ministry of Agriculture (MoA) beginning in January, 1995. The total project cost is estimated at US\$ 40.7 million comprising US\$ 10 million in USAID grant assistance and US\$ 30.7 million equivalent in local currency from the Government of Bangladesh (GoB).

ATDP was designed to create conditions for expanding and strengthening private agribusiness in eight subsectors – Seed and field crops, Fertilizer, Agrimachinery, Horticulture, Agroprocessing, Poultry, Fisheries, Livestock – by helping them gain access to three key inputs: policy, technology and credit. The purpose of the project is to increase productive employment in agriculture and related enterprises through the creation of competitive markets for agricultural and agribusiness inputs, outputs and technologies.

In order to perform different activities to achieve the objectives of the project, ATDP has set up eight field offices in Kapasia, Rangpur, Jessore, Chittagong, Sherpur, Sylhet, Rajshahi and Barisal. It has organized itself into five operational units (1) Policy Unit, (2) Technology Unit, (3) Credit and Investment Unit, (4) Management Information System (MIS) Unit, and (5) Administration and Training Unit.

The evaluation was conducted from August 1998 to November 1998 in order to: a) assess the impact of ATDP to date, including the Agribusiness Credit Fund; b) recommend possible ways, if any, in which the project might increase the impact of its services over the remaining life; and c) help guide future USAID programming decisions in agribusiness.

FINDINGS AND CONCLUSIONS

Achievement of the Project

ATDP has significantly contributed to the creation of awareness among people about the potentials of agribusiness development in the country. In terms of six agreed-upon results indicators (Exhibit 1), the performance of ATDP seems impressive. However, the validity of current measurement techniques is open to debate. (See recommendation on refining results indicators).

Administration and Management

Findings

- The total number of staff in ATDP is 172 of whom 49% work in Dhaka. Fourteen professionals from GoB and parastatals are working in the project on loan.
- All eight subsectoral program coordinators, five unit heads and all the staff in the CoP's office including STAMP and PABA managers report to the CoP.

- Among ATDP's 80 professional staff (excluding MIS and Administrative and Training Unit), 68 (i.e., 85%) are from basic agriculture background while only 5 (i.e., 6%) are from business and finance background.

Conclusions

- ATDP covers too many subsectors and geographical areas for the available resources. This may be due to expectations created by the original project design, which was based on a much higher level of funding.
- The project management appears to be overly centralized at the headquarters level.
- There is a preponderance of production technology-oriented personnel among the project's professional staff and a lack of private sector experience. The MoA felt that persons with the requisite marketing and management skills are not readily available in the Bangladesh labor force.
- The six results indicators for measuring the impact of the project do not adequately measure project performance.
- The Evaluation Team found ATDP's claims of benefits to be often overstated and sometimes not supported.

TECHNOLOGY

Findings

- The technology component of ATDP stimulates private sector agribusiness development through: technology needs assessments; technology transfer modules; an enterprise development support program; demonstrations and field days; in-country training; workshops and seminars; and international training.

Conclusions

- ATDP has overly focussed on technological aspects of agribusiness promotion. It has not given enough attention to assessing market potential of products and services.
- The Project has worked more with farmers and microenterprises than with agribusiness companies/entities. On a positive note, this may have helped create a base of farmers from which agribusinesses can procure produce.
- An important mandate of the project was to develop forward and backward linkages between the farmer and the processor and/or exporter. The Team has seen few successful linkages.
- The international training programs supported by ATDP have proved to be an effective way for private sector entrepreneurs to acquire new technology.

CREDIT

Findings

- The main objective of ACF is to improve productivity and profitability of agribusiness by extending adequate and timely credit, technical assistance, marketing information and technology to the entrepreneurs.
- The fund is being implemented by nine participating banks. The fund has been placed under Bangladesh Bank for lending, management and monitoring. It is now being implemented in 36 districts.
- By the end of May, 1998, a total of 7257 loans worth Tk. 3233 million (US\$ 65 million) had been provided by the nine participating banks. Two sub-sectors – fertilizer (37.5%) and agroprocessing (28.5%) (mostly cold storage) – appear as the major areas in loan disbursement.
- The attainment of the target can largely be attributed to short term loans including working capital and trading loans. The recovery rate has been consistently over 95%, which is in line with the recovery rate for other short term lending programs.

Conclusions

- The ACF is being utilized by the banks in financing existing enterprises or old and/or present clients. More than 60% of the total loans disbursement were working capital and/or trading loans.
- There are some weaknesses in the design and implementation of the ACF, which have limited its success. One of the major weaknesses is that the design of the fund allowed for provision of working capital loans. This allowed banks to achieve lending targets by focusing on short term lending rather than providing investment capital for the expansion of existing agribusinesses or the development of new businesses. (The MoA felt that the concentration on short term loans was due to several factors including a shortage of working capital from other sources and the preference of bankers for shorter term, less risky loans).

POLICY

Findings

- The Policy Unit developed a policy matrix, which identifies over 90 policy issues or constraints. The Matrix briefly discusses the implications of the policy issues and offers intervention plans for the policy makers. It has been successfully used as a guide towards advocating ATDP's policy agenda, primarily using dialogues and discussions as the modus operandi.
- ATDP has assisted in the establishment and promotion of a number of agribusiness associations.

Conclusions

- The overall impact of the Policy Unit is positive and complements activities pursued by the other units within ATDP. Although a part of the Evaluation Team concluded that the project suffered from a lack of policy analysis, the MoA concluded that ATDP 'has done well' by not concentrating on analytical research.

Management Information System

- ATDP produces regular reports on the daily fertilizer factory situation, weekly fertilizer retail prices, monthly agricultural input and market monitoring, and a monthly agribusiness bulletin.
- In February 1998, ATDP developed its own website to link Bangladesh agribusiness globally. ATDP provided 55 entrepreneurs with information on markets and technology through its INFOMAT program.
- The MIS unit of ATDP monitors the performance of the project.

Findings and Conclusions by Sector

Seed and Field Crops

Findings

- Most of the activities have supported demonstrations, field days and training on agronomic practices of small farmer production of seed (cereals and vegetables) for the existing seed companies, and production of maize and soybeans.

Conclusions

- Although maize and soybean are key ingredients to help fuel the tremendous expansion in the poultry sector and are important crops in the GoB's efforts at crop diversification, the project's efforts in linking these ingredients to the poultry sector through processors, traders and dealers are inadequate.

Fertilizer

Findings

- Through June 1998, more than two-thirds of the demonstrations and field days and 97% of domestic training organized in the fertilizer subsector were on USG usage. They included around 14,000 participants, mostly farmers (nearly 80%).
- The MoA appreciates ATDP's fertilizer monitoring reports. Research organizations and donor agencies also use these reports.

Conclusions

- Although ATDP's promotion of USG has led to the development of private entrepreneurs for manufacturing USG and higher productivity within a limited area, it appears to the Evaluation Team that too much effort has been devoted to promotion of USG, which is a single nutrient (i.e., nitrogenous) fertilizer. Very few efforts are being made to address the problem of unbalanced NPK applications.

- While the Ministry of Agriculture (MoA) has greatly benefited from the fertilizer monitoring services of ATDP, not enough emphasis has been given to institutionalization of these services within the MoA.

Horticulture

Findings

- Most of the activities have focussed on demonstrations, field days and local training for improved fruits and vegetables production and management.
- ATDP has partially funded private companies and entrepreneurs to master production and processing technology (includes market access) of baby corn, orchid etc. through foreign trips and consultants.

Conclusions

- There has been little, if any, success in the promotion of fruits and vegetables production for processing and export marketing.

Livestock

Findings

- ATDP supported different umbrella groups and NGOs for providing training to small farmers in improved beef and dairy cattle production (includes UMB, fodder crop production). It also funded consultancy services for selection of exotic heifers and the design of integrated dairy farming.
- A serious constraint for beef and dairy production is the availability of feed.
- There are also problems in marketing milk at a fair price. This is due to a shortage of processing facilities.

Conclusions

- ATDP has not sufficiently recognized the agribusiness potential in the areas of feed and dairy processing

Poultry

Findings

- Organized field days and training to motivate and orient individual entrepreneurs in poultry production and management, including broiler and layer. Assisted ten private sector entrepreneurs to attend specialized foreign training on poultry production and management (includes poultry operations, sanitary practices, diagnostic laboratory).

Conclusions

- One of the major achievements of the project is in the field of poultry production and management. However, a major constraint is the lack of diagnostic laboratories to provide diagnosis and treatment of poultry diseases.

Agroprocessing

Findings

- ATDP conducted demonstrations, field days and local training on small-scale preparation of tomato ketchup, chanachor, jam, jelly, juice etc., and organized contract growing arrangement for pineapples with a processor.
- ATDP provided technical assistance (includes seed capital for initial operations) for formation of an agroprocessors' association.

Conclusions

- Most of the activities have been on small-scale home-based processing skills training and orientation.

Agrimachinery

Findings

- Conducted demonstrations, field days and training on UMB machine, USG machine, power tiller etc. participated by about 700 participants, of which more than 70% were farmers. Eight private sector entrepreneurs were assisted to attend specialized foreign training in agricultural machinery manufacturing, including hydraulic related issues.

Conclusions

- Most of ATDP's efforts in this subsector has been in demonstrating production related (e.g., tillage operations like power tiller) machineries which are already well known in the country.

Fisheries

Findings

- Assisted entrepreneurs to acquire and master the production technology of Rosenbergi and Thai pangus through training and consultancy services (includes designing plans for modernizing and expanding fish farm, improved hatchery management, market assessing etc.).

Conclusions

- The fisheries sector has recently been added to ATDP. However, the project has provided support to a number of fisheries training programs.

Sector-wise percentage distribution of project cost and employment generation are shown below:

Sector	% project cost^a	Employment in Person Year
Seed & Field Crops	19.8	14,082 (39.1)
Fertilizer	23.8	3,884 (10.8)
Horticulture	8.0	291 (0.8)
Agrimachinery	8.5	1,868 (5.2)
Livestock	8.5	8,469 (23.5)
Poultry	13.5	4,202 (11.7)
Fisheries	3.7	667 (1.8)
Agroprocessing	14.2	2,550 (7.1)
Total	100.0	36,013 (100.0)

^a Excluding common costs.

Source: Team's estimates based on data provided by ATDP.

Note: Figures in the parentheses represent the percentages of total employment.

Overall Conclusions

- ATDP has contributed to the development of agribusiness in Bangladesh, although the impact to date appears to be somewhat overstated by ATDP using the agreed upon indicators.
- The overall access by the private sector to the credit, technology and information through the project has been good.
- ATDP's efforts in promoting USG, poultry and dairy through GoB agencies, NGOs, agribusiness companies and private entrepreneurs are notable initiatives of institutional collaboration.
- The project has suffered from a lack of sector and geographic focus.
- Project management has been deficient in the areas of staffing, reporting, coordination and delegation of authority.
- The policy unit has made a positive contribution in the development of agribusiness, although the project's efforts in policy analysis appear to a part of the Evaluation Team to be inadequate. The MoA felt that the lack of emphasis on analytical research was appropriate.
- The ACF has been a valuable source of short term financing for certain agribusinesses. However, it has had limited success in terms of creating new agribusinesses largely because of this focus on financing working capital and trading loans to existing entrepreneurs.

RECOMMENDATIONS

Administration and Management

- ATDP needs to review its staff, both at headquarters and in the fields, in line with a greater program focus over the remaining period of the project.
- The project would benefit if a senior level expatriate agribusiness adviser is hired to work with CoP.
- The CoP should delegate some administrative and financial authority to Unit Heads and Program Coordinators which will free up his time for providing strategic input to the management of the project.
- GoB, USAID and ATDP should consider undertaking the task of refining the results indicators for precision and clarity.

Policy

- ATDP should continue its effective method of policy interventions through dialogues and seminars. The dialogues can complement Policy Briefs and other analytical exercises which the project undertakes.
- The Policy Unit should assist the agribusiness associations in developing in-house policy advocacy, research and analytical capabilities of these organizations.
- The project should consider strengthening the capacity of the Policy Unit by engaging local professionals who have sound analytical capability and experience.
- The Policy Unit needs to prioritize policy issues and pursue with appropriate agencies to achieve final outcome i.e., the policy changes.

Technology

ATDP should:

- Establish six technology-cum-marketing service centers with adequate technical and logistical support. (The MoA, however, feels that the offices in Sylhet and Barisal should continue as those areas have the potential for agribusiness). With limited resources, it would make sense for each service center to select 2-3 priority subsectors that have the greatest potential for development in a particular area¹:

Existing <i>Field Office</i>	Suggested		
	Service Center	Districts	Sectors/Subsectors (arranged in order of priority)
Dhaka-HQ	Dhaka	Dhaka, Gazipur, Tangail	Agroprocessing, Horticulture, Poultry, Fertilizer (Specially blended fertilizer)
Kapasia	Proposed merging with Dhaka	NA	NA
Rangpur	Rangpur	Rangpur, Dinajpur	Seed & Field Crops, Dairy
Jessore	Jessore	Jessore, Kushtia	Horticulture, Seed & Field Crops
Chittagong	Chittagong	Chittagong, Rangamati, Banderban	Poultry, Horticulture
Sherpur	Sherpur	Sherpur, Jamalpur	Horticulture
Rajshahi	Rajshahi	Rajshahi, Chapai Nawabganj	Agroprocessing, Horticulture
Sylhet	Proposed to drop	NA	NA
Barisal	Proposed to drop	NA	NA

NA = Not Applicable

- Emphasize complete package of services, starting from production to marketing, rather than just providing production technology oriented extension services.
- Consolidate grant program headed by one manager with supporting staff which would be more effective and efficient.
- Engage an entity to act as an umbrella organization to provide small/micro grants for small farmer skills training.

Credit

- To achieve project objectives, the targeted credit program should be well focused. In this context, there is a need for redesigning the ACF component of the project. During the next fourteen months of the project, the ATDP should:

¹ For details, see, Exhibit 20.

- Make the project as pilot project for entrepreneurship development for agribusiness promotion.
- Implement the project in selected districts and be specific about project objectives.
- Restrict or limit working capital/trading loans.
- Provide incentive to the bankers for better use of the fund in achieving the ultimate objective of the project.
- Make Bangladesh Bank more active in management of the ACF.

Sector Specific Recommendations

Seed and Field Crops

- ATDP should increase its direct assistance to seed companies to upgrade their technical (includes processing, preservation and marketing of cereal and vegetables seeds) and managerial capacity.
- Linkages of crop sector (e.g., maize and soybean) with non-crop sector(s) (e.g. poultry feed) should be strengthened in the agribusiness promotion strategy of ATDP.

Fertilizer

- ATDP should focus on blended fertilizer to encourage balanced use of nutrients by farmers. However, emphasis on fertilizer blending per se must be preceded by efforts to enact fertilizer regulations to control potential adulteration and other illegal practices that can be easily incorporated into fertilizer blending operations.
- ATDP will develop and submit to the project steering committee by 20 February 1999 a plan to transfer fertilizer monitoring and reporting activity to the MoA.

Agrimachinery

- ATDP should focus on post-harvest equipment over the remaining LoP. However, these activities could be integrated into the agroprocessing subsector.

Livestock

- ATDP should give more emphasis on commercial production of feed and fodder crops. Efforts should be directed towards dairy farming, processing and marketing. Beef fattening should be dropped.

Fisheries

- ATDP should focus on fish processing over the remaining period of the project. However, the activity can be integrated into agroprocessing subsector. Therefore, it is recommended that ATDP should get out of fisheries sub_sector.

Poultry

- Hatchery development and broiler processing should get high priority.
- ATDP should consider focusing on the development of facilities in the private sector for diagnosis and treatment of poultry diseases. Information should be disseminated on disease diagnosis.

Horticulture

- Linkage of horticulture subsector with agroprocessing subsector should get due consideration in horticultural activities.

Agroprocessing

- ATDP should promote and develop the vertical integration of production from farm to industry, based on such mechanisms as contract farming. The necessary institutional mechanism to sustain such integration should be developed and implemented.

Chapter 1: INTRODUCTION

1.1 Overview of the Project

Agribusiness is an essential element of Bangladesh's agricultural economy, but its employment and income generation potential has not been fully realized because of lack of access to technology, information, credit and an environment conducive to investment. The Agrobased Industries and Technology Development Project (ATDP) was designed to realize this potential. The purpose of ATDP is to increase productive employment in agriculture and related enterprises through the creation of competitive markets for agricultural and agribusiness inputs, outputs and technologies.

The ATDP seeks to achieve this purpose by focussing on encouraging private sector agribusiness development in the seed and field crops, fertilizer, horticulture, agrimachinery, livestock, poultry, fisheries and agroprocessing subsectors through the following project elements:

- Policy analysis, formulation and reform as relating to domestic and international trade, industry and research and technology development.
- Technology search, development and transfer through feasibility analyses, developing transfer modules and technical assistance and training to private sector in technology adaptation and adoption and visit to trade fairs.
- A US\$ 26 million Agribusiness Credit Fund (ACF)-channeled through the Bangladesh Bank-that provides short, medium and long-term loans to the entrepreneurs for developing different agribusiness subsectors. Large, small or microenterprises as well as NGOs are eligible for ACF funds.

The project seeks to create conditions for expanding and strengthening private agribusiness in eight subsectors--seed and field crops, fertilizer, agrimachinery, horticulture, agroprocessing, poultry, fisheries, livestock -- by helping them gain access to three key inputs: policy, technology and credit.

In order to perform different activities to achieve the objectives of the project, the implementation contractor, IFDC, has established a headquarters office in Dhaka. It has organized itself into five operational units: (1) Policy Unit, (2) Technology Unit, (3) Credit and Investment Unit, (4) Management Information System (MIS) Unit, and (5) Administration and Training Unit. Under the Technology Unit, ATDP has eight subsectoral programs (Annual Workplan, 1998-99). In line with these elements/functional units, there are four enterprise development support programs under the ATDP: Support for Technology Acquisition and Mastery Program (STAMP), Market Access and Technology Training Program (MATT),

Program for Assistance to Borrowers from the ACF (PABA), and Information on Markets and Technology (INFOMAT). STAMP provides assistance with decision making on agribusiness technology acquisition and mastery, MATT provides access to foreign markets and technology training, PABA provides grants to borrowers of the ACF to help them achieve their loan objectives and INFOMAT provides information to ACF borrowers and STAMP recipients on markets and technology. All the managers assigned for STAMP, MATT, PABA and INFOMAT are stationed at Dhaka and report directly to the Chief of Party (CoP).

ATDP extends its services all over the country through its eight field offices in Kapasia, Rangpur, Jessore, Chittagong, Sherpur, Sylhet, Rajshahi and Barisal. Each field office is headed by a Field-in-charge who is assisted by 1-3 professionals located in the field office. However, recently ATDP has recruited more than 30 APOs who have been posted in different areas under the jurisdiction of the field offices.

The ATDP is a five-year project of the Ministry of Agriculture (MoA) beginning in January 1995. The total project cost is estimated at US\$40.7 million comprising US\$10 million in USAID grant assistance and US\$30.7 million² equivalent in local currency from the Government of Bangladesh (GoB). It may be noted that in the beginning the ATDP project contract was for US\$ 3.8 million and which would continue up to November 1997. The project was focused on producing deliverables that were largely defined in terms of outputs such as workshops, field days, feasibility studies and various reports. In December 1996, USAID provided IFDC a revised contract that reflected USAID's shift in concern from the original project deliverables to a new set of results. In July 1997, the contract was extended through January 2000 and the value of the contract was raised to US\$ 9.75 million. The remaining US\$ 0.25 million was kept outside the contract for Audit/Evaluation/Special Studies/Management support.

The GoB counterpart agency is the Ministry of Agriculture (MoA). However, the project also works with the Ministries of Industry, Commerce, Finance, Fisheries and Livestock, NGOs, trade associations, the Export Promotion Bureau, and Chambers of Commerce and Industries. As several ministries and agencies are involved in implementing different components of ATDP, an Inter-ministerial Project Steering Committee is formed to ensure participation of all such agencies.

1.2 Scope of Evaluation

This is a mid-term evaluation of the ATDP. The purposes of the evaluation are to (a) assess the impact of ATDP, including the Agribusiness Credit Fund (ACF) to date; (b) recommend possible ways, if any, in which the project might increase the impact of its services over its remaining life; and (c) help guide future USAID programming decisions in agriculture and agricultural finance.

² \$26.0 Agribusiness Credit Fund, ACF (sales from USAID Fertilizer Distribution Improvement, FDI Project).
\$ 3.0 agribusiness promotion (ACF interest)
\$ 1.7 custom duty/VAT and FDI II assets

To accomplish the above purposes, the Evaluation Team was expected by USAID to focus on and to provide answers to the following questions:

I. Impact to Date:

- What have been the benefits of the ATDP to date in terms of increased income and job creation?
- To whom have such benefits accrued (e.g., agribusiness owners, including farmers, laborers, consumers)?
- What has been the cost of ATDP services (information, managerial and technical skills transfer, and credit) to date, and how do they compare with the benefits?
- What services have had the most impact, and in what sectors and regions? The least?

II. Opportunities for ATDP:

- Over its remaining life, which products and services, sectors and geographic areas are most likely to contribute to income growth and job creation?
- How can ATDP best ensure the long-term sustainability of activities supported by the project?

III. Opportunities in Agriculture after ATDP:

- Within the field of agribusiness what activities should USAID support after the completion of ATDP in the year 2000?

The detailed Terms of Reference (ToR) for the Evaluation Team is given in Annex I.

1.3 Evaluation Team

The Evaluation Team consists of the following six professionals:

- 1) Team Leader: Dr. Mohammad Shahidur Rahman Bhuiyan, Agricultural Economist, USAID Economic Growth and Agricultural Development Team.
- 2) Economist: Dr. Najmul Hossain, Economist, USAID Economic Growth and Agricultural Development Team.
- 3) Agriculture Economist: Mr. Syed Motahar, Agriculture Economist, USAID

- 4) Socio-Economist: Dr. Khondaker Arif Ahmed, Joint Chief, Ministry of Agriculture, Government of Bangladesh.
- 5) Private Agribusiness Specialist: Robert A. Delemarre, Senior Program Advisor, South-East Consortium for International Development, Washington D.C.
- 6) Financial Markets Consultant: Dr. M.A. Baqui Khalily, Professor, Department of Finance & Banking, Dhaka University.

1.4 Methodology

The Team essentially employed two methods to evaluate the project: (1) Document review; (2) Interviews.

1.4.1 Document Review

The Team has reviewed ATDP Project Paper, Project Proforma (PP), Contract etc. ATDP's Annual Progress Report, Annual Work Plan, Periodic Monitoring Report, Report on Modalities of ACF, PABA, STAMP, MATT, INFOMAT, Quarterly Credit Monitoring Report, Policy Matrix, Policy Census have been reviewed. The Team has thoroughly reviewed Special Impact Study conducted by ATDP. ATDP has also produced a large number of technical reports which have been studied by the Team. Annex II contains a list of documents reviewed by the Team.

1.4.2 Interview

A large number of interviews and discussions were conducted during the course of evaluation in August, September and October 1998. Whenever possible, at least two members of the Team were present for key interviews. The Team had elaborate discussions, more than once in many cases, with 33 ATDP headquarters professionals (including the CoP) from different functional units and subsectoral programs. A pre-designed checklist was used for discussion (Annex III). The Team visited all the field offices except one (Kapasias, Rangpur, Rajshahi, Jessore, Barisal, Chittagong, Sherpur), and discussed with the ATDP field staff, local GoB officials, local NGO officials, bank officials, entrepreneurs, agribusiness entities, and farmers at each of the field offices. The Team interviewed 172 respondents (entrepreneurs and farmers: 87, ATDP staff: 26, NGO officials: 13, GoB officials: 6, Bank officials: 7, Agribusiness firms: 23, Association members: 4, other: 6) in the field offices: 16 from Kapasias, 17 from Rangpur, 48 from Rajshahi, 30 from Jessore, 12 from Barisal, 24 from Chittagong and 25 from Sherpur. Among the total respondents interviewed, about 50% of the respondents interviewed were selected by the ATDP Field Team and the remaining 50% were randomly selected by the Evaluation Team. The Team also interviewed 10 Agribusiness Companies in Dhaka (e.g., East-West Seed Ltd., PRAN, ACI Ltd., NAPL etc) with a pre-designed checklist (Annex IV). GoB officials (3) and bank officials were interviewed in Dhaka. Interviews with NGO officials (3) and other related project officials (4) focussed on eliciting responses to a set of questions (Annex V). Periodic meetings were held

with relevant USAID and ATDP staff to discuss preliminary findings, sharpen the focus of the evaluation, and draw useful recommendations. A complete list of the persons interviewed can be seen in Annex VI.

1.5 Limitations of the Study

The Team could not do an in-depth analysis of the performance of ATDP based on primary sources of data. ATDP has prepared a special impact study report in August 1998 with its in-house staff. Although the Team spent a considerable amount of time to review this study, it was difficult in sifting reliable data from it.

The Team recognizes that disaggregation of the contribution of each factor or input in the production process is extremely difficult. ATDP is a complex project with multiple components. The project does not have any control group. Hence, it is difficult to estimate econometrically the production function or to apply with or without analysis to quantify the specific contribution of ATDP in bringing about changes in income and output in the relevant sectors/subsectors. However, the Team observed some instances of inaccurate information on performance of ATDP, some of which were revised, based on the Team's suggestion, in the later version of the Special Impact Study Report. For example, the assumptions on which ATDP calculates the adoption of improved technology by farmers are unrealistic. In fact, the extent of adoption rate should be assessed through a sample survey. In addition, it appears that ATDP is double counting number of farmers adopting new technologies.

The key problem the Team faces is that ATDP provides small, but important inputs and functions as a valuable catalyst. However, ATDP then implies by its calculations and supporting narrative that it was responsible for all the value added from the interventions which are implemented by individual farmers and entrepreneurs with support from other technical assistance providers.

1.6 Organization of the Report

The report is divided into three major chapters. Chapter 1 provides the overview of the project, terms of reference for the evaluation and the limitations of the study. The overall findings and conclusions related to major functional areas of the project (e.g., Administration and Management, Policy, Technology, Credit) and findings by assistance (Policy, Technology and Credit) provided to different sectors (Seed and Field Crops, Fertilizer, Horticulture, Livestock, Poultry, Agroprocessing, Agricultural Machinery, and Fisheries) are the subject of Chapter 2. Chapter 3 presents both general and specific recommendations that have emerged from this evaluation.

Chapter 2: FINDINGS AND CONCLUSIONS

2.1 Findings and Conclusions by Major Components of the Project

2.1.1 Overview

The contractual agreement between USAID and IFDC stipulated six result indicators to measure the impact of the project. Exhibit 1 presents the performance of the project in terms of attaining the targets of the result indicators. Based on the contract requirement, ATDP is well on its way to achieve the contract requirement.

Exhibit 1 Contract Requirements and ATDP Achievement

Results Indicators	Contract requirements (5 years)	ATDP achievement up to June 1998* (3.5 years)
1. Farmers with increased income using more productive environmentally sound technologies	100,000	84,872
2. Contract Growers initiated with private business investments	72	83
Pilot zones initiated	8	8
3. Agricultural productivity through agribusiness increased	7,000	2,509
4. Agricultural productivity through agribusiness investment increased	\$ 100 million	\$ 150.83 million
5. Agricultural productivity through agribusiness employees increased	130,000	36,013 ^b
6. Policy Reform ^a	750 points	365 points

^a Different weights were given for different policy reforms based on importance and ATDP's contributions. For details, see, 'Policy Issues Related to Agribusiness Development in Bangladesh', Prepared by Policy Unit, ATDP, 1997.

^b The revised figure is estimated at 33,262.

* Source: Special Impact Study. September, 1998

Data provided by ATDP through 20 October, 1998 Communication

Overall, the results reported by ATDP seem quite impressive. However, the validity of current measurement techniques is open to question. For example, ATDP has assumed that at least five percent of the total participants in a particular training or field demonstration will adopt the improved technology. Again, there is a definitional problem in case of the indicator concerning

initiation of contract growers/pilot zones. The team also believes that the result indicators themselves are misleading.

ATDP has undertaken a financial analysis to measure the impact of the project under different assumptions. With the inclusion of money saved due to the policy recommendation for withdrawal of subsidy on urea, the estimated Internal Rate of Return (IRR) is 72% and the Benefit-Cost Ratio (BCR) is 1.53 (at 15% discount rate). However, without benefit from subsidy withdrawal, the IRR will be negative and BCR is 0.42 (at 15% discount rate) (Annexes VII and VIII). The Team has reservation about ATDP'S claim of full credit for the withdrawal of subsidy on urea.

2.1.2 Administration and Management

2.1.2.1 Findings

- As stated earlier, there are five units at the Dhaka office: Technology Unit, Credit and Investment Unit, Management Information System (MIS) Unit, Policy Unit, Administration and Training Unit. In theory, the eight ATDP subsectoral programs are under Technology Unit (Annual Workplan, 1998-99). However, there is no Technology Unit in the organogram of the revised project management and operational manual, 1998 (Annex IX).
- Since inception of the project, livestock, poultry and fertilizer coordinators used to report to the head of the Technology Unit (Annex X). However, all the eight sectoral program coordinators are now reported to be responsible to the CoP for programmatic matters and to the head of Technology Unit for administrative matters. In reality, the program coordinators do not seem to be responsible in any substantive manner to the head of the Technology Unit (Figure 1). All the five Unit heads also report to the CoP. All the Field office managers report to the Program Coordinator (Seed and Field Crops) except Kapasia and Sherpur. But some Program Coordinators and some Unit heads also direct the Field office managers in the pilot zones without the knowledge of the Program Coordinator (Seed and Field Crops).
- The Field-in-Charges of Kapasia and Sherpur report to the North-Central Regional Coordinator who, in turn, reports to the CoP directly (Figure 1). Moreover, all the staff in the CoP's office including STAMP and PABA managers report to the CoP.
- Although the Field-in-Charge is responsible for implementation, coordination and supervision of various sectoral activities in a particular zone or region, the field level APOs (Assistant Program Officers) are not accountable to him for their activities. Instead, they directly report to the respective Sectoral Program Coordinator at the headquarters. The MIS staff visits a particular zone and goes back to Dhaka to report to the Headquarters about the impact of different activities pursued in a particular area. The Field-in-Charge does not know when the MIS staff comes and when he/she goes from a particular zone or what the findings in terms of results are. In this situation, it is not possible for the Field Office-in-charge to do a meaningful coordination among all the activities in his area. These are serious limitations for informed decision making.

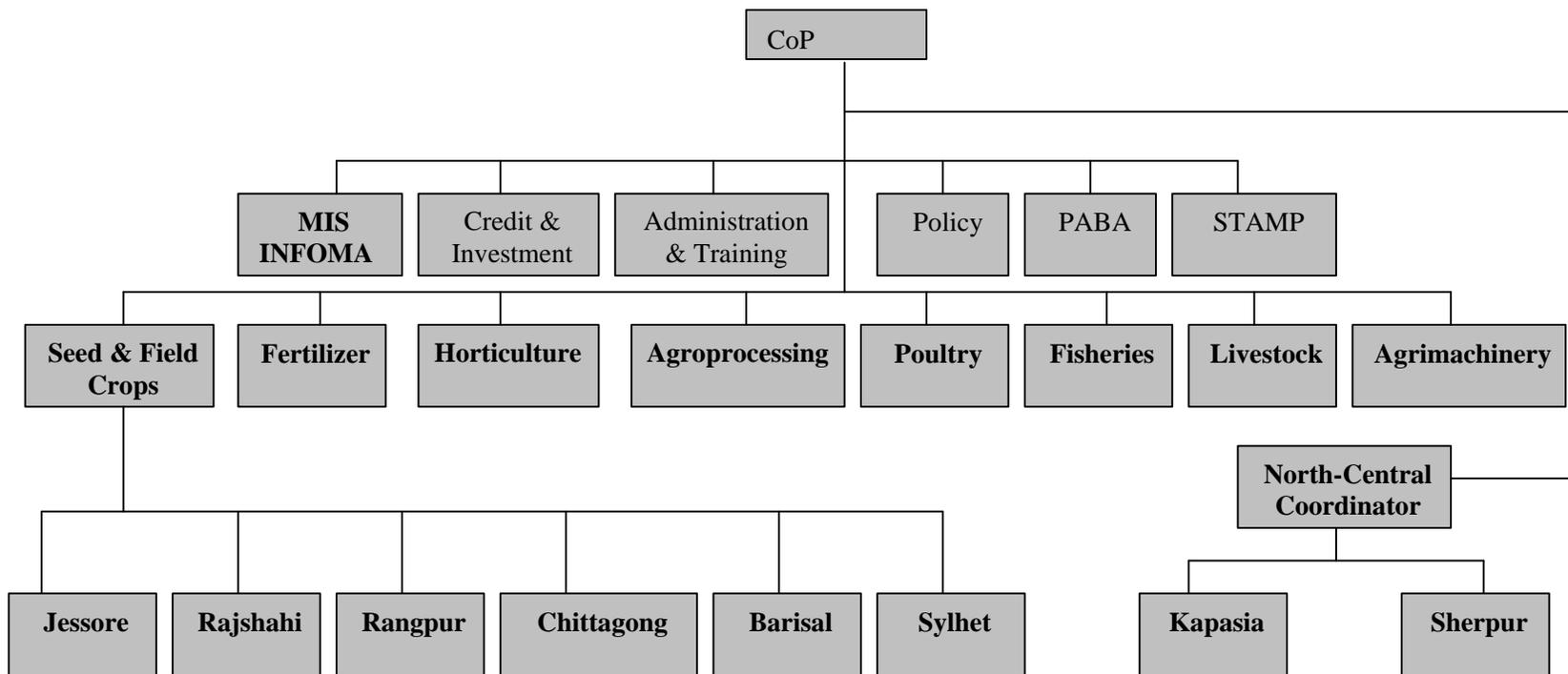


Figure 1 Current ATDP Organogram

- The Field Office-in-charge can not approve leave of his subordinate staff nor can he approve a voucher for a small amount of money. The field office has to get approval for everything from the Dhaka office.
- The total number of staff in ATDP is 172 of which 49% work in Dhaka. About four months ago, before 32 APOs were hired and fielded, the ratio of headquarter to field staff was about 65%/35% i.e., on an average, for one field staff there were about two Headquarters staff.
- The current ATDP staff has among it a number of persons who have been hired through some of the following venues:
 - a. Holdovers from Fertilizer Distribution Improvement (FDI) II project. There are as many as 27 professionals and 12 support staff who have been hired from the FDI -II project.
 - b. Lien- GoB staff (including BADC staff) who have taken a lien and are entitled to return to their former positions. Fourteen professionals (8 from GoB, 3 from BADC, 1 from Bangladesh Krishi Bank, 2 from Bangladesh Small and Cottage Industries Corporation) are working on lien.
- Among ATDP's 80 professional staff (excluding MIS and Administration and Training Unit), 68 (i.e., 85%) are from basic agriculture background while only 5 (i.e., 6%) are from business and finance background.
- The team observed that many of the ATDP field and headquarters staff did not get their job description on time. It was reported by the Field-in-Charge of Rangpur that even with his persuasion he received his job description after 14 months of his joining.
- Out of eight field offices, no transport has been provided in four field offices. Each of these field offices is supposed to cover from 5 (e.g., Sylhet) to 11 districts (e.g., Barisal) with 1-2 professional staff located in each of these field offices. It has been reported by some of the professionals of these four field offices that more than half their time is spent travelling to and from clients as they have to rely on public transportation. ATDP vehicles at headquarters are used as taxis, before work and after work, to transport ATDP staff to and from the office. This impinges on the availability of transport for the technical staff and hampers their ability to visit the field to carry out their work. There are no word processing facilities in at least 2-3 field offices.

2.1.2.2 Conclusions on Administration and Management

ATDP is an important and relevant project for Bangladesh. However, it has some problems in management and operations which affect its potential impact. A number of these are:

- ATDP has tried to focus on too many sectors and geographical areas with a limited amount of resources. This may be due to expectations created by the original project design, which was based on a much higher level of funding.

- The project management appears to be overly centralized at the headquarters level.
- The line of reporting is unclear. There is lack of operational autonomy in the field offices. The headquarters appears to be overstaffed and the field offices understaffed. The logistics are unequally distributed between the headquarters and the field offices. The annual workplan seems to be unrealistic. These have certainly affected the performance of the project.
- The present reporting system leads to a certain degree of centralized project management and puts too much work load on CoP. As a result, the CoP does not get enough time to provide strategic inputs in the overall project management.
- As per organograms of ATDP, 1995 and 1998 (Annexes IX & X), the CoP is supposed to provide guidance to the Unit Heads of ATDP, and not directly supervise the activities of Program Coordinators. This has led to a situation where the CoP is unable to effectively coordinate among the various sectoral groups at the headquarters level. Similar is the case at the field level.
- There seems to be a preponderance of production technology oriented personnel among the project's professional staff and a lack of private sector experience³. The project needs personnel who understand the total chain of the agricultural sector from providing farm inputs to farmer production, linkage with processors and domestic and export marketing. The recruitment of personnel has not been done with a good understanding of the type of personnel who can best help meet the project's objectives (e.g., program coordinators for horticulture and agrimachinery). In fact, to achieve the goals and objectives of the project of promoting private sector agribusiness development, an important activity of the ATDP was to develop forward and backward linkages between the primary product producer/farmer and the processor and/or marketer including exporter. The Team has seen few, if any, linkages that have been attempted and fewer still that are successful.
- Given the poor logistics situations in four field offices (those where there is no transports nor word processing facilities), it is difficult to understand how each of these four field offices will be able to accomplish tasks planned in the Annual Workplan for July 1998 through June 1999.
- The lack of logistics support of Assistant Program Officers (APOs) undermines their capability to do their job in an efficient manner.
- The Team believes that GoB (including BADC, BSCIC, BKB) staff working at ATDP on loan lack orientation in private sector agribusiness development.

³ The MoA felt that persons with the requisite marketing and management skills are not readily available in the Bangladesh labor force.

- As the MIS unit of ATDP is too much involved in fertilizer monitoring, it cannot give adequate attention to other sub-sectors.
- ATDP was bound to report to USAID on outputs specified in their contract. These were quite ambiguous and ATDP has responded by reporting numbers, against targets, which appears to be greatly inflated.
- ATDP has performed well in terms of achieving the results indicators. But ATDP's claims of benefits appear to be often overstated and sometimes not supported.
- The team has serious difficulty in understanding the six result indicators for measuring the project's impact. For example, what is meant by "Agricultural productivity through an increase in agribusiness investments?" The mere fact that additional agribusinesses have been established does not necessarily translate into increased productivity. To cite another indicator, "number of farmers with increased incomes, using environmentally sound technology". An environmentally sound technology may not always increase farmer's income. It may even increase the cost and reduce farmer's income. Thus the results indicators for measuring the impact of the project do not adequately measure project performance.

2.1.3. Technology

2.1.3.1 Findings

Technology unit is working as a unit of technology and marketing management. Its mandate is to promote and develop agribusiness. To that end, the unit stimulates private sector agribusiness development through identification and demonstration of available proven technologies. It also provides support to agroindustrial firms and commercial farmers. It carries out exercise on technology need assessment, entrepreneur selection and technology module development. It provides technical assistance to establish new agribusiness enterprises as well as upgrade the existing ones through counseling and consultancy services, visits at home and abroad, in-country and overseas training, demonstrations, field days, conference and workshops. It plays a catalytic role to increase investment and employment opportunities through promotion and development of agribusiness. It helps enterprises establish backward and forward linkages with markets, customers and producers.

2.1.3.1.1 Technology Needs Assessment

An initial technology needs assessment was carried out by ATDP in December 1995 to identify technologies that would provide opportunities for developing viable and sustainable agribusiness enterprises in different focus subsectors as mentioned earlier⁴. The assessment considered both regional/pilot zone (e.g., originally proposed 14 zones) relevance as well as scale of business operations (Annexes XI & XII). In addition, technology need assessments of some degree were done for Kapasia and Rangpur. After the task of technology need assessment was done, some entrepreneurs were selected for close counseling. For other field areas, targets in the workplan were set without much effort in technology needs assessment and selection of entrepreneurs.

According to technology unit, through 27 October 1998 ATDP has identified 87 technologies (e.g., true potato seed, hybrid seed, USG etc.; Annex XIII) and products (juice, jelly, jam etc.) for business promotion. Some are very broad or nonspecific in nature (e.g., irrigation equipment, certified seeds for all crops etc.) while some others are specific (e.g., blended fertilizer, fish-cum-duck etc.). Out of 87 technologies and products, 26 have been selected for national program (e.g., certified seed, USG, power tiller, balanced feeding for livestock, rearing exotic poultry breed; processing: juice, paste and slice, aluminum foiling, etc.). 33 have been identified for the pilot zones (foundation seeds, sprayers, propagation of HYV fruits, wooden bucketing etc.) and 17 have been identified for experimental purpose (true potato seed, bio-fertilizer, dual mode thresher, growth regulator, recycling of animal waste etc.). 6 technologies were identified as specific to some selected agribusiness companies (e.g., tissue culture, modified container for horticulture export etc.). Some other (5) technologies were merely selected by ATDP (e.g., gene bank, liquid urea etc.) without any follow up action on these.

⁴ Details can be seen in 'Report on Technology Needs Assessment' (December 1995). Prepared by ATDP.

Subsector-wise list of technologies and products identified follows below:

Seed & Field Crops: Certified Seed (all crops), Foundation Seed (all crops), True Potato Seed, Tissue Culture, Hybrid Seed.

Fertilizer: Urea Super Granule, Micro-nutrients, Blended Fertilizers, Bio-fertilizer, Neem Pesticide.

Agrimachinery: Power tillers, Sprayers, Irrigation equipment, Threshers, Shellers (corn), Power, Solar and Power Dryers, USG Briquetter machine, Straw chopper, Fertilizer Blenders, Hydro tiller, Reaper (power tiller mounted), Paddy transplanter, Dual mode thresher, Seed drill (soybean).

Horticulture: Propagation of HYV Fruits, Growth Regulators, Floriculture/Cut-flowers, Hormone Treatment, Baby corn, Nursery (Fruit Crops/Agro-forestry), Modified container for horticulture export, Summer tomato.

Livestock: Livestock, Fodder production, Artificial Insemination; Non-traditional Feed UMS, UMB, etc., Regular Vaccination, Goat Rearing, Proper Treatment, Improved Sanitation, Sheep rearing, Selective Breeding, Beef Fattening, Bio-security.

Poultry: Rearing Exotic Breed (Broiler), Rearing day old chick, Rearing Exotic Breed (Layer), Regular Vaccination, Confinement & Stall Feeding, Proper Treatment, Balanced Feeding, Improved Parent Stock, Improved Hatchery, Improved Sanitation, Bio-security.

Agroprocessing: Juice, Jam, Pulp, Paste, Jelly, Powder & Dust, Slice, Squash, Recycling of animal waste, Pasteurization, Puri, French fries, Sauce, Ketchup, Pickles, Marmalade, Morabba, Dehydration, Baking, Chips, Aluminum Foiling, Canning, Bottling, Paper Packeting, Wooden Bucketing.

Fisheries: Hatchery, Fish-cum-duck, Rearing exotic breeds, Polyculture, Balanced feeding.

2.1.3.1.2 Technology Transfer Module

ATDP has developed eight technology transfer modules: Urea Super Granule (USG), blended fertilizer, Urea Molasses Block (UMB), beef fattening, embryo transfer, fruit plantation management, fruits and vegetables canning and dehydration, and animal feed milling. These modules focussed on demand, scope and potentials, constraints and cost-benefit analysis of the respective technologies, and therefore provided a good basis for agribusiness investment promotion.

In order to disseminate and transfer various technologies at farmer and entrepreneur level ATDP used mainly two techniques: (a) Demonstration and field day (b) In-country training. The other methods were on-farm level consultancy input and foreign trips (Exhibit 2).

Exhibit 2 Technological Deliverables Achieved by ATDP/IFDC through June 1998

Deliverables	Number mentioned in	
	ATDP Annual reports	ATDP Impact study
Initial assessment of technology needs	1	DNA
Technology transfer modules	5 ^a	DNA
Demonstrations and field days	175	195
Technical assistance to contract growing	88 ^b	88
Brochures/video film	17	24
In-country training/workshop	199	216
International training	25	38

Source: ATDP/IFDC Annual Reports:

May 1995-June 1996, Table 1, p.7

July 1996-June 1997, Table 6, p.13

July 1997-June 1998, Table 5, p.14

Special Impact Study Report of ATDP/IFDC, September 1998, Table 6, p.11

a. According to ATDP/IFDC Technology Transfer Modules, July 1996 (p.8), it is 8.

b. Mostly existing contract growing arrangements

DNA = Data Not Available.

2.1.3.1.3 Enterprise Development Support Programs

As mentioned in section 1.1, in its efforts to assist Bangladeshi-owned entrepreneurs to acquire and master agricultural and agribusiness inputs and technologies and develop new markets for their products, ATDP has developed a series of programs to provide information, educational and technical services, and (indirectly) financing to this sector. These four programs, listed as their acronyms are STAMP, MATT, PABA, and INFOMAT. Each of these programs is discussed below:

Support for Technology Acquisition and Mastery Program (STAMP)

The purpose of STAMP is to assist locally owned firms plan major investments in agroindustrial plant, equipment, machinery and/or technology. Under the program, STAMP advisors can assist the applicant with the following on a gratis basis: a) a review of business proposals and identification of new technologies for the proposed enterprise; b) assist with the preparation of STAMP grant requests; and c) access industrial and technology sources of information. Under the grant component, the project can provide financial assistance on a cost sharing basis for: a) travel to potential providers of equipment and technology to determine if these items meet the grantee's needs; b) engaging local or international consultants to advise on technology adoption and/or acquisition needs; and c) specialized training needed to operate the proposed enterprise.

STAMP provides grants on a cost-sharing basis as follows: a) up to 75% for the first grant; b) up to 50% for a second grant; and c) up to 25% for a third grant. In addition to regular (Macro) grants, individuals with assets of Tk. 300,000 (about \$6,500) or less can often qualify for "micro grants" wherein STAMP may provide up to 100% of the funds required. This is usually provided

for groups of small entrepreneurs. Funding for STAMP grants comes from the ACF Matching Grant Fund.

Market Access and Technology Training Program (MATT)

MATT's purpose is to assist Bangladeshi-owned agro-based companies and entrepreneurs to: a) Familiarize themselves with the latest agro-based technologies and international markets for agro-products; b) Develop their international agro-product market contacts and marketing techniques; and c) Promote their agri- and agro-products throughout the world. Similar to STAMP, MATT also provides funding on a cost-sharing basis for private sector participants.

Program for Assistance to Borrowers from the ACF (PABA)

PABA was established as a vehicle to assist borrowers from the ACF meet their loan objectives and ensure timely and full repayment of their ACF loans. ACF loans are available to credit-worthy borrowers, and PABA is in turn available to such borrowers. The main role of PABA is to facilitate borrower access to technical assistance that will materially improve the borrower's business operations and to assist with international travel to expand business opportunities abroad. Like STAMP and MATT, PABA grants are also made available on a cost-sharing basis.

STAMP, PABA, and MATT programs have assisted a number of private agribusiness companies in valuable ways. Aqua Resources, a recipient of STAMP grant, was extremely successful in accessing markets for frozen shrimp.

A PABA macro grant was provided to the Agricultural Marketing Company Ltd. (PRAN), under which an expatriate consultant worked with the firm to increase its production capacity and develop new product lines utilizing locally grown fruits and vegetables. New items developed include dried mango, guava and pineapple, while dehydrated oyster and straw mushrooms are being produced and exported. The Chief Executive Officer (CEO) of PRAN stated that his observation tours were very valuable to him in this respect. However, he opined that ATDP has not been successful to link up small business entities and primary producers as suppliers of raw materials to agroproduct processors.

Paragon Poultry, a recipient of MATT grant, has established a poultry diagnostic laboratory after training in the United States. Another participant sold some rice to a United States buyer as a result of his U.S. tour⁵.

Information on Markets and Technology Program (INFOMAT)

INFOMAT was established to assist agro-based companies and entrepreneurs: a) Become aware of the latest agro-based technologies and international markets for their products; b) Find international agro-product markets; and c) Foster agribusiness contacts throughout the world. To

⁵ It is understood that many participants may have come back from training/observation tours with knowledge that has helped improve their operations, but this is a difficult result to quantify.

qualify for assistance under INFOMAT, one should be a borrower from the ACF, or have a grant from the STAMP program.

Through 30 June 1998, INFOMAT provided 55 entrepreneurs with information on markets and suppliers of equipment and production inputs. This information service is provided free through INFOMAT's computer information network service.

2.1.3.1.4 Demonstrations and Field Days

Through June 1998 ATDP has conducted 175 demonstrations and field days (Exhibit 3). Around 94 per cent of the demonstrations and field days were done to promote improved production/input use technology. Very few demonstrations and field days were conducted for dissemination of post-harvest and processing technologies. Therefore, participants in the demonstrations and field days were dominated by primary product producers/farmers (more than 78%, Exhibit 4).

Exhibit 3 Number of Demonstrations and Field Days Conducted by ATDP through June 1998

Demonstrations and Field Days	Number
Production/input use technology	164
Post-harvest technology	1
Entrepreneurship development for women	1
Processing	9
Total	175

Source: ATDP/IFDC Annual Reports.

Exhibit 4 Nature of participants in Different Promotional Activities Conducted by ATDP through June 1998

Activity	Farmers	Entre-preneurs	GoB Official	NGO Official	Bank Official	Others	Total
Demonstration and Field Days	30900 (78.4)	3066 (7.8)	3893 (9.9)	0 (0.0)	0 (0.0)	1555 (3.9)	39414
Domestic Training Programs	3981 (37.0)	3228 (30.0)	1076 (10.0)	1076 (10.0)	1076 (10.0)	323 (3.0)	10760
Domestic Workshops/ Seminars	239 (10.0)	716 (30.0)	476 19.9	0 (0.0)	716 (30.0)	239 (10.0)	2386
Total	35120 (66.8)	7010 (13.3)	5445 (10.4)	1076 (2.0)	1792 (3.4)	2117 (4.0)	52560

Source: ATDP/IFDC.

2.1.3.1.5 In-country Training, Workshop and Seminar

Out of 210 domestic training (including workshop and seminar) organized through June 1998, 138 or 66 per cent were for imparting technological skills for production of primary products (Exhibit 5). Training events for post-harvest technology including packaging, marketing, and contract farming awareness were found to be rare.

Exhibit 5 Number of Domestic Training, Workshop and Seminar Organized by ATDP through June 1998

Domestic Training, Workshop and Seminar	Number
Production/input use technology	138
Post-harvest technology/packaging	2
Entrepreneurship development for women	1
Processing	14
Marketing and export (includes conference)	5
Contract farming awareness	1
General (computer skills, fertilizer demand projections, seed survey etc.)	12
Business plan and skills, project proposal, motivational training for banker	27
Expert consultation, formation of Association etc.	8
Policy workshop	2
Total	210

Source: ATDP/IFDC.

2.1.3.1.6 International Training

International training organized by ATDP was funded by both USAID funding and ACFDF. Number of programs by ATDP subsector and functional unit are given in Exhibits 6 & 7. In all, 35 programs were implemented on technology (Exhibit 7). Out of 116 participants, 57 were private sector entrepreneurs (Exhibit 8).

Exhibit 6 Number of International Training Programs Implemented by ATDP through 30 June 1998 According to Sectors and Sources of Funding

Sector	Under USAID Funding	Under ACFDF (including MATT)	Under exclusive funding of private sector	Total
Seed & Field Crops	1	4	0	5
Fertilizer	1	3	3	7
Poultry	1	4	1	6
Livestock	0	1	0	1
Agroprocessing	3	3	0	6
Horticulture	1	1	0	2
Agrimachinery	0	5	0	5
Fisheries	0	1	0	1
Multi-sectoral/ General	7	13	0	20
Total	14	35	4	53

Source: ATDP/IFDC.

Exhibit 7 Number of International Training Programs Implemented by ATDP through 30 June 1998 According to Functional Units and Sources of Funding

ATDP units	Under USAID Funding	Under ACFDF (including MATT)	Under exclusive funding of private sector	Total
Policy	3	9	0	12
MIS	0	1	0	1
Technology	9	22	4	35
Credit and Investment	2	3	0	5
Administration	0	0	0	0
Total	14	35	4	53

Source: ATDP/IFDC.

Exhibit 8 Number of Different Categories of Participants in International Training Programs Implemented by ATDP until 30 June 1998

No of Trainee	Under USAID Funding	Under ACFDF (including MATT)	Under exclusive funding of private sector	Total
Private Entrepreneurs	16	33	8	57
GoB officials	6	20	0	26
Bank officials	5	9	0	14
NGO's officials	1	1	0	2
ATDP officials	4	7	0	11
Others	4	2	0	6
Total	36	72	8	116

Source: ATDP/IFDC.

2.1.3.2 Conclusions on Technology

- ATDP has not given enough attention to assessing the market potential of products and services. It has focussed too much on the technological aspects of agribusiness promotion.
- After December 1995, technology needs assessment was never updated or revised in a systematic or coherent manner in light of lessons learnt on technical and market potentials as well as redefinition of pilot zones/field offices.
- In view of the expertise available with ATDP, it has tried to identify too many technologies in too many areas. Without thorough feasibility studies, the mere identification of technologies does not carry much value. The Team has observed that many of the technologies have been identified just for the sake of identification. The concern of the Team is that from such type of identification process it is difficult to get a sense of what technologies ATDP are promoting on a priority basis for dissemination and transfer. They have done very little assessment of needs to come up with appropriate interventions.
- Although ATDP claims that it has identified 26 technologies for national programs, practically none of these technologies except UGS has gone under national program.
- Region specific technology needs assessment and identification of entrepreneurs prior to the preparation of workplan did not receive priority.
- As the technology transfer in case of USG, fruits and vegetables dehydration was done as per module (includes technical and market potentials, socio-economic feasibility etc.), their rate of adoption was good. Preparation of transfer modules for other technologies were de-emphasized by the ATDP and eventually abandoned. However, the danger of absence of

technology transfer module is to ignore some of the essential linkages like marketing and support services. Consequently, the ATDP staff have made unplanned approaches to technology transfer in many cases. In promoting the production of baby corn, maize and soybean at farm level, marketing aspect did not get adequate attention and therefore the output of the promotional efforts was less than optimum.

- In the absence of prioritization of technologies and transfer modules, the ATDP field staff were in a state of confusion and resorted to easy way of promoting production through organizing extensive demonstration, field days and training⁶. This confusion was aggravated when the importance of the functional leadership of the technology unit was gradually weakened and completely eroded while all program coordinators started reporting directly to the CoP and head of Technology unit was entrusted with the responsibility of coordinating only seed sector⁷.
- ATDP provided more technological assistance to the existing farmers/enterprises/businesses involved in agribusiness and less to the development of new ones.
- ATDP has worked more with farmers and microenterprises compared to agribusiness companies/entities. On a positive note, this may have helped create a base of farmers from which agribusinesses can procure produce.
- Heavy emphasis on training and field days do not provide the kind of hands-on customized services needed for agribusiness development.
- For successful diffusion of improved technology, an important mandate of the project was to develop forward and backward linkages between the farmer and the processor and/or exporter. The Team has seen few successful linkages. Several unsuccessful attempts include baby corn and pineapples in Kapasia.
- The international training programs supported by ATDP have proved to be an effective way of acquiring new technology by private sector entrepreneurs.
- It appears that ATDP was having limited success in providing STAMP grants for "major" investments and therefore decided to expand their universe in order to meet their USAID target goals.
- Most of the NGOs and /or associations receiving micro grants are not agribusinesses. These groups are not eligible to receive grants under STAMP. There are many opportunities for NGOs to obtain financial assistance for providing training.

⁶ For detailed information on demonstration, field days and training conducted by ATDP, see, sections 2.1.3.1.4 and 2.1.3.1.5.

⁷ For details, see, section 2.1.2.1.

- A number of external training programs organized through ATDP, under USAID funding and under ACF funding, appear to be excessive in costs (Source: External Training Programs Organized through ATDP under USAID and ACF Funding, dated 14 September 1998).

2.1.4 Credit

The main objective of ACF is to enhance the overall economic strength of the country by improving the status of the agricultural sector. In this connection, the specific objectives of ACF are to:

- Improve the productivity and profitability of agribusiness by extending adequate and timely credit, technical assistance, marketing information and technology to the entrepreneurs.
- Make funds available and accessible to institutional credit providers for use of demand driven clients that want to establish new businesses in the selected sub-sectors of ATDP.
- Enhance the growth and development of the existing agribusiness.
- Increase availability of new or adapted technologies to foster growth and development of the overall agricultural sector.
- To increase employment opportunities and contribute to an increase in the standard of living in Bangladesh.

2.1.4.1 Findings

- ACF is one of the major interventions of the ATDP project in order to develop and promote agribusiness. The US\$ 26 million fund is being implemented by nine participating banks including three Nationalized Commercial Banks, two development banks and four private commercial banks. Terms and conditions of the ACF are quite flexible and are based on the principle of “deregulation” in price setting. The ACF is applicable for almost all types of agribusiness development and promotion including working capital loan. Working capital/Trading loan has been heavily emphasized.
- Utilization of the ACF is largely for working capital/trading loans. Sonali Bank and private commercial banks are the examples. About 95 percent of the target disbursement has been achieved. This is comparable with that of other programs.
- About 19 percent of the total disbursement of Tk. 3,233 million was financed by ACF and the rest by bank’s own fund. The degree of own financing is correlated with the term and types of loan.
- According to ATDP publication, about 72 percent of the loans disbursement was short term and more than 90 percent of the short term loans was working capital/trading loan.

- According to ATDP publication, about 38 percent of the loans went to fertilizer sub-sector followed by about 29 percent to the agroprocessing (mainly cold storage) sub-sector. There is a little conflict with the findings of the seven bank survey that the Team conducted. According to the Team survey, 54 percent of the loans went to the agroprocessing (mainly cold storage) and less than ten percent to fertilizer sub-sector.
- Average loan size is around Tk. 70,000 per actual borrower. This is about Tk. 446,000 per bank borrower, according to ATDP publication.
- Recovery rate is more than 95 percent. Recovery rate of short-term loans has always been more than 90 percent in other programs. There is a little conflict in statistics provided by ATDP and found in the seven bank survey. However, there is a declining trend.
- Sustainability of the ACF is not subject to question. The banks do not incur any additional operating cost. Interest margin is 8 percent. In real term also, interest margin is positive. At this level, default cost is yet to be a major problem. Interest margin is fully available contributing to the sustainability of the bank but not of the ACF as interest is fully contributed to the development fund.
- Bangladesh Bank as per the design of the project allocates funds to the banks. These funds are lent at bank rate. At the end of each financial year, Bangladesh Bank charges interest on the full principal amount and realizes it accordingly, regardless of the use of fund and loan recovery. It imposes extra constraint on the banks.
- The ACF Development Fund has provided US\$ 0.88 million in interest repayments to fund technical assistance and training.
- Out of 7,257 ACF borrowers, only 1,338 (i.e., 18%) have obtained PABA grants which facilitates borrowers access to technical assistance (Exhibit 9).

Exhibit 9 Number and Percent of PABA Recipients out of Total ACF Borrowers by Sector through May 1998

Sector	No. of ACF Borrowers	No. of PABA Recipients	% of ACF Borrowers Received PABA
Seed & Field Crops	3598	1204	33.5
Fertilizer	200	4	2.0
Horticulture	22	2	9.1
Agrimachinery	340	22	6.5
Livestock	2196	10	0.5
Poultry	247	47	19.0
Fisheries	469	48	10.2
Agroprocessing	182	1	0.5
Others	3	0	0.0
Total	7257	1338	18.4

Source: ATDP

2.1.4.2 Conclusions on Credit

- The ACF has achieved limited success. Until now, the credit component has failed to demonstrate strong development impact. The credit program should be focused on the development of agribusiness. Financing working capital and trading loans for existing enterprises should not be the focus of the targeted program. There is a need for developing agribusiness with forward and backward linkages. To achieve this objective, the credit program should be well focused.
- Perception of the bankers is not appropriate and well-focused on the objectives of the ACF.
- Multi-dimensional management and monitoring system (banks are in reality subject to monitoring of ATDP, Bangladesh Bank and Ministry of Agriculture) acts as disincentive for the banks and creates confusion.
- Allocation system is not scientific as target is achieved in most cases by providing working capital loans.
- Provision of working capital loans in the design of the project enables banks to take detour in achieving the target devoid of ultimate objective, so the design of the ACF enables bank to find an escape route. Provision of working capital loans allowed banks to achieve lending targets by focusing on short term lending rather than providing investment capital for the expansion of existing agribusinesses or the development of new businesses. (The MoA felt that the concentration of short term loans was due to several factors including a shortage of working capital from other sources and the preference of bankers for shorter term, less risky loans).

- Insignificant amount of the ACF in relation to total rural finance make the bank less motivated.
- Major focus on financing of old clients makes the use of ACF very limited in terms of impact.
- Data management of the ACF is extremely poor and out of focus.
- The effect of the ACF on enterprise development cannot be determined because of small size of the project and fungibility of fund.
- Given the nature of the loan, the high rate of recovery does not provide any unique achievement of the ACF/ATDP.
- The rule regarding repayment of the ACF and interest payment to the Bangladesh Bank by the participating bank is not logical and scientific⁸.
- Impact of the ACF at the field level is difficult to assess. It requires a comprehensive study. The data provided by ATDP does not provide any evidence of positive impact. Poor data quality may have attributed to this.
- Conceptually, the arrangement of the use of ACF Development Fund is wrong. It gives free ride to non-borrowers and others who are not contributing to the fund. Moreover, most lenders are not fully aware of the fund or its utility.
- The relationship between the ACF and technology component of the project is very little.

⁸ At the end of each financial year, Bangladesh Bank charges interest on the full principal amount and realizes it accordingly, regardless of the use of fund and loan recovery. It imposes extra constraint on the banks.

2.1.5 Policy

2.1.5.1 Findings

The policy component of ATDP is aimed at identifying policy constraints which adversely affect the agricultural and agribusiness sectors of Bangladesh. Concurrently, the project's mandate is to promote a level policy playing field for the agribusiness sector of Bangladesh.

The Policy Unit comprises of a Senior Policy Adviser (retired Secretary of GoB), one assistant to the Senior Policy Advisor (a Government Civil Servant, who is on lien) and two support staff. The Chief of Party (CoP), is also involved in promoting the policy agenda. At an early stage of the project, a full-time expatriate policy advisor was employed by the project. A number of studies including one on measuring Effective Rates of Protection enjoyed by agro-related products was completed under his guidance.

The Policy Unit has been a positive force in the promotion of agribusiness of Bangladesh and in complementing the activities of the various subsectors covered under the project. Aside from contributions in the infusion of technology, marketing, credit, policy advocacy from ATDP can also lay claims as a catalyst in the significant growth witnessed in poultry, fishery and other agribusinesses during the past few years.

In October 1997, the Policy Unit developed a policy matrix, which identifies over 90 policy issues or constraints -- some specific and other general. The policy issues cover a wide array of components -- seed and field crops, fertilizer, horticulture, livestock, poultry, and agroprocessing. Concerted input from the various departments within ATDP, and discussions with private entrepreneurs and associations contributed in the development of the matrix. The policy matrix was updated in July 1998.

Some of the issues selected in the matrix are too broad and encompassing to warrant specific ATDP intervention. Nevertheless, as reflected in Exhibit 10, ATDP has made direct contributions in bringing policy changes on 26 issues, accomplishing relatively greater success on issues related to agroprocessing.

The Policy Matrix developed is an useful tool in identifying the various policy issues associated with each of the targeted components (seed, fertilizer, others). The Matrix briefly discusses the implications of the policy issues and offers intervention plans for the policy makers. It has been successfully used as a guide towards advocating ATDP's policy agenda, primarily using dialogues and discussions as the modus operandi. This strategy is effective, especially since ATDP's senior staff have good rapport and access to the policy makers.

Exhibit 10 Number of Policy Issues Identified in the Policy Matrix

Sector	Policy Issues Identified	Number of Policy Changes Made
Seed and field crop	15	4
Fertilizer	12	2
Horticulture	7	3
Agrimachinery	7	1
Livestock	12	3
Poultry	9	1
Fisheries	11	5
Agroprocessing	12	6
Multisectoral	9	1
Total	94	26

[Source: (1) Policy Issues Related to Agribusiness Development in Bangladesh, October 1997, July 1998; Prepared by Policy Unit of ATDP; (2) Special Impact Study Report, August 1998, Prepared by Ishrat Jahan and Sharifa Khan, ATDP, pages 46-48; (3) Policy Changes Made Relevant to Some of the Policy Issues Identified by ATDP, September 1998; Prepared by Policy Unit of ATDP]

A review of the policy initiatives suggest that ATDP has dealt with a number of critical issues affecting the various sectors. In the area of seed and field crops, ATDP has focused on the importance of truth in packaging and in the promotion of seed production. The Policy Unit has assisted the Fertilizer unit in the promotion of USG and has been an exponent of reduction of subsidy on urea prices. The Horticulture Unit's attempts at export promotion of Bangladesh's horticulture products have benefited from the Policy Unit's push for improved cargo facilities from the national air carrier -- Bangladesh Biman. Along the same vein, ATDP has succeeded in directly or indirectly influencing policy makers and bankers in removing certain constraints related to fishery, poultry, and other components under ATDP.

2.1.5.2 Conclusions on Policy

The overall impact of the Policy Unit is positive and complements activities pursued by the other units within ATDP. However, the project's efforts in policy analysis are sporadic⁸. The Policy Unit has not undertaken many complementary activities to support policy changes advocated through dialogues and seminars. For instance, with the exception of a very useful piece on trade policy of selected agrobased products (Aziz, Mustafa, 9 October, 1997), ATDP's Policy Unit has not produced many Policy Briefs or other complementary analytical documents. ATDP's MIS unit collects a wide range of data on a regular basis. The Policy Unit has not undertaken advantage of this activity in collecting additional appropriate information for developing Policy Reports or in the documentation of the experiences at the field level.

⁸ The MoA concluded that ATDP 'has done well' by not concentrating on analytical research.

2.1.6 Management Information System

- The MIS Unit of the project is engaged in (a) providing market information for the eight subsectors of ATDP to policy makers and private sector agribusiness entrepreneurs and (b) monitoring project activities and impact of these activities.
- ATDP is currently one of the active monitors of agricultural markets in Bangladesh. It collects information monthly on retail prices of fertilizer and fertilizer availability, seed prices in selected retail markets, seed use by farmers, sources of medicine and vaccines obtained by farmers for their poultry and livestock.
- Among the regular reports produced by the project are: (1) Daily fertilizer factory situation reports provided to the officials of the MoA and BCIC for action. (2) Weekly fertilizer retail price report (3) Monthly agricultural input and market monitoring reports provided to the senior policy makers and program managers involved in agriculture throughout the government and leading businesses, trade associations and chambers of commerce and industry. (4) Monthly Agribusiness Bulletin is a newsletter provided to over 5,000 agribusinesses, financial institutions and policy makers throughout the country, highlighting new technologies, agricultural trends, business news and information useful for guiding decision making and agribusiness development.
- In February 1998, ATDP developed its own website to link Bangladesh agribusiness globally. ATDP provided 55 entrepreneurs with information on markets and technology through its INFOMAT program.
- The MIS unit of ATDP monitors the implementation of the project as per the approved workplan, provide quarterly progress reports on project output and deliverables and project results. It prepares an annual report consolidating the quarterly reports indicating the annual progress of accomplishments towards each result indicator, constraints of project implementation and proposed solutions to constraints, and indicate cost and time overruns, if any.
- While preparing the Annual Work Plan, although some discussions with the field staff are done, all the field offices do not do a comprehensive baseline survey on the agribusiness potentials of a particular region and the constraints to realization of this potential. The Annual Workplan does not prioritize its activities for a particular year, both among and within the eight specific subsectors. It does not show how many staff will be assigned to implement the activities. Nor does it provide detailed cost estimates by field offices and by major component and subcomponents which would have given a better idea about ATDP's priorities in a particular year.

2.2 Findings and Conclusions by Sector

2.2.1 Seed and Field Crops

2.2.1.1 Findings

2.2.1.1.1 Overview (Seed and Field Crops)

The crop subsector, and in particular food crops, represented 73% of the value added in agriculture and 24% of total GDP during 1996-97 (GoB 1998, p. 231)⁹. Between 1980 and 1990, total foodgrain production increased by 38 percent, largely due to 40 percent increase in rice production. Production trends in the 1990s are less encouraging: between 1990 and 1997, rice production increased by only 6% (Ninno and Dorosh 1998, p.3)¹⁰. Bangladesh average rice yields of 1.77 tons/hectare (equal to approximately 2.64 tons of paddy/hectare) are still low compared to average Asian paddy yields of 4.0 tons per hectare in Indonesia and 5-6 tons/hectare in China and Korea.

Rice yields of HYV have become stagnant and there has been a reduction in the yield of Boro rice and wheat. The growth of non-cereal crops has also been disappointing, except for vegetables and spices. One of the major limiting factors that prevent the growth of productivity in the crop sector, is the lack of high quality seed. Less than 50 percent of the area under rice uses high yielding varieties (Aus 17.3%, Aman 34% and Boro 80%). For other major crops the percentage of area using HYV was higher: wheat nearly 100%, jute 73%, potatoes 63% and sugarcane 60% (FAO 1994)¹¹. However, most of the required seed is produced by the farmers themselves and these seeds are generally of poor quality.

Only a fraction of the required seeds are certified seeds (2-3%). Considering that for self-pollinated crops like wheat and rice, about 20% of the total seed required for the year need to be replaced, the existing supply of certified seeds is grossly inadequate. Total production of all types of certified and foundation seeds has been around 45,000 mt during 1996/97.

Seed development accounts for about 28% of total financial provision for the crop agriculture sector during the GoB's Fifth Plan, 1997-2002. Through June 1998 ATDP has spent about 20% of project cost¹² (15% of USAID funding and about 26% of ACFDF) for seed and field crops (Exhibit 11, Figures 2-4).

⁹ The Fifth Five Year Plan, 1997-2002. Planning Commission, Ministry of Planning, Government of Bangladesh, Dhaka. March 1998.

¹⁰ Government Policy, Markets and Food Security in Bangladesh. Paper prepared by Carlo del Ninno and Paul Dorosh, for World Bank. March 1998.

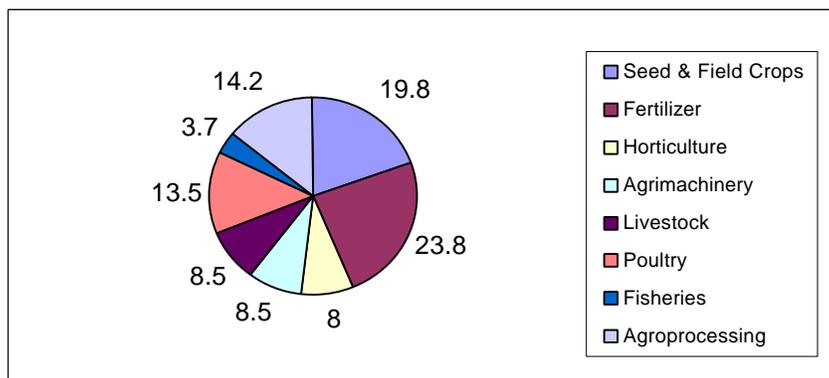
¹¹ Follow-up to Bangladesh Agriculture Sector Review. Food and Agriculture Organization of the United Nations, Rome. August, 1994.

¹² If common/joint costs are considered, seed and field crops accounted for 3.3% (1.7% of USAID funding and 13.6% of ACFDF) of total project cost (Exhibit 12, Figures 5-7).

**Exhibit 11 Project Expenditure by Sector and Source of Funding through June 1998-
excluding Common Costs**

Sector	USAID Fund (A)		ACFDF (B)		Total (A+B)	
	Amount (US\$)	%	Amount (US\$)	%	Amount (US\$)	%
Seed & Field Crops	88,989	15.1	119,229	25.6	208,218	19.8
Fertilizer	136,525	23.2	114,776	24.6	251,301	23.8
Horticulture	60,560	10.3	23,040	5.0	83,600	8.0
Agrimachinery	61,965	10.5	27,973	6.0	89,938	8.5
Livestock	55,892	9.5	33,889	7.3	89,781	8.5
Poultry	72,257	12.3	70,023	15.0	142,280	13.5
Fisheries	16,507	2.8	22,642	4.9	39,149	3.7
Agroprocessing	95,979	16.3	53,909	11.6	149,888	14.2
Total	588,674	100.0	465,481	100.0	1,054,155	100.0

Source: ATDP/IFDC.



**Figure 2 Project Expenditure (USAID & ACFDF combined) by Sector through June 1998-
excluding Common Costs**

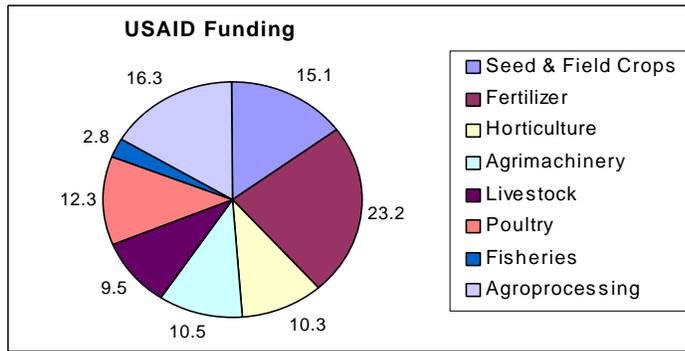


Figure 3 Project Expenditure (USAID Funding) by Sector through June 1998-excluding Common Costs

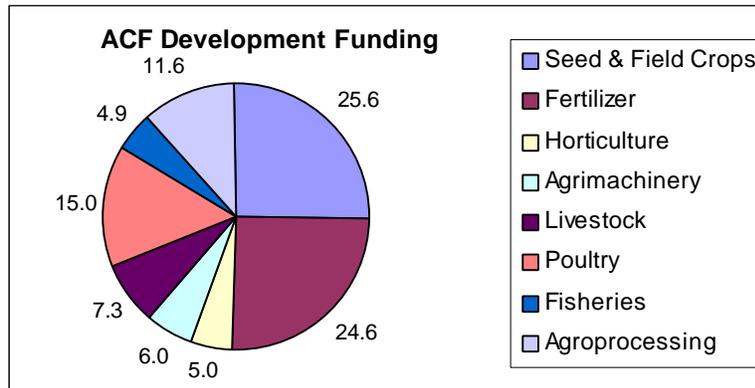


Figure 4 Project Expenditure (ACFDF Funding) by Sector through June 1998-excluding Common Costs

Exhibit 12 Project Expenditure by Sector and Source of Funding through June 1998- including Common Costs

Sector	USAID Fund (A)		ACFDF (B)		Total (A + B)	
	Amount (US\$)	%	Amount (US\$)	%	Amount (US\$)	%
Common	4,763,214	89.0	410,382	46.9	5,173,596	83.3
Seed & Field Crops	88,989	1.7	119,229	13.6	20,218	3.3
Fertilizer	136,525	2.6	114,776	13.1	251,301	4.0
Horticulture	60,560	1.1	23,040	2.6	83,600	1.3
Agrimachinery	61,965	1.2	27,973	3.2	89,938	1.5
Livestock	55,892	1.0	33,889	3.9	89,781	1.5
Poultry	72,257	1.3	70,023	8.0	142,280	2.3
Fisheries	16,507	0.3	22,642	2.6	39,149	0.6
Agroprocessing	95,979	1.8	53,909	6.1	135,128	2.2
Total	5,351,888	100.0	875,862	100.0	6,212,991	100.0

Source: ATDP/IFDC.

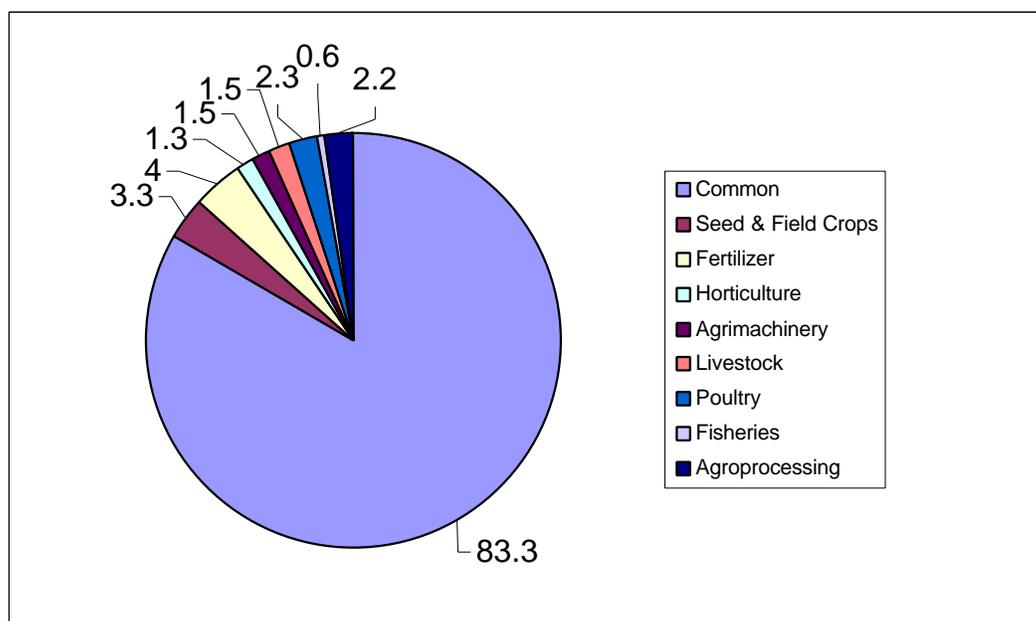


Figure 5 Project Expenditure by Sector (USAID & ACFDF Combined) through June 1998-including Common Costs

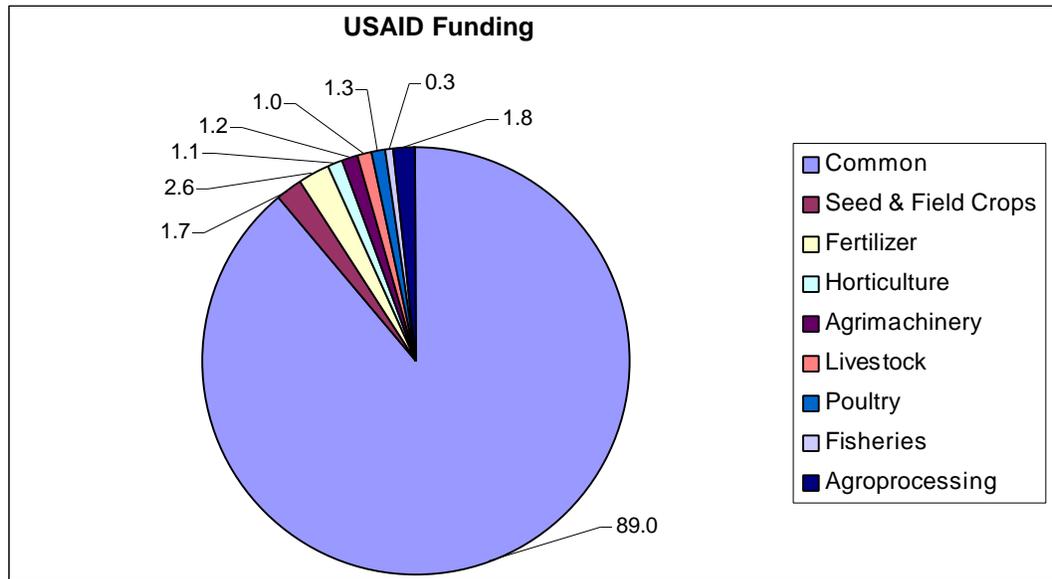


Figure 6 Project Expenditure by Sector (USAID Funding) through June 1998-including Common Costs

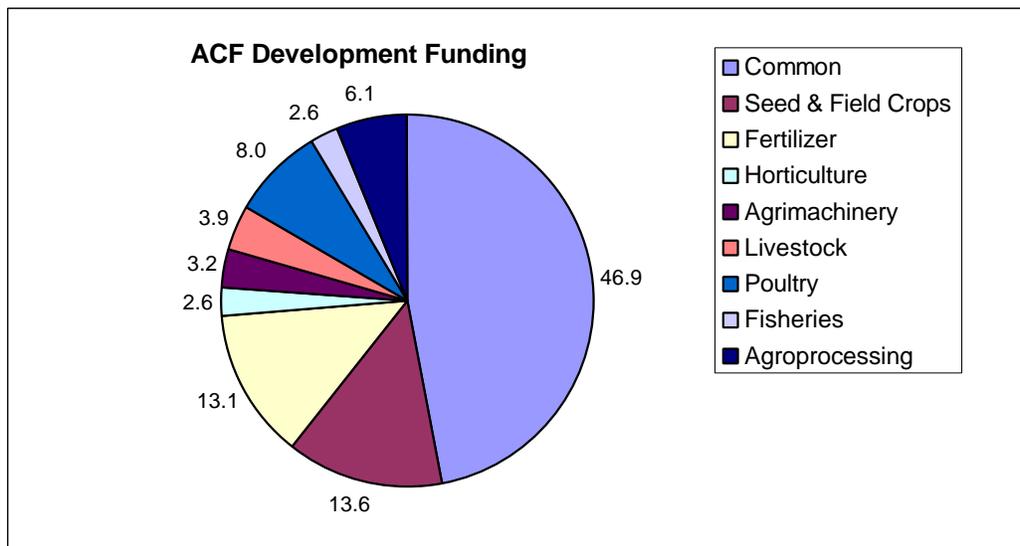


Figure 7 Project Expenditure by Sector (ACFDF Funding) through June 1998-including Common Costs

2.2.1.1.2 Policy (Seed and Field Crops)

ATDP has correctly emphasized the need for greater usage of improved seed towards enhanced agricultural growth. More than a dozen policy issues related to seed and field crops have been identified, and removal (or improvement) of the constraints are likely to improve the supply and/or demand conditions. Accessibility to better seeds, better knowledge about the types available, and the respective roles of the private sector and regulatory bodies and extension services in the seed market are being articulated by ATDP. In addition, availability of credit to seed growers has been espoused.

2.2.1.1.3 Market/Technology Information and know-how (Seed and Field Crops)

ATDP has:

- Conducted several farm level demonstrations, field days and domestic training on seed potato production (includes cereal crops) and maize and soybean cultivation practices that involved 13,228 participants of which about 85% were farmers/contract growers (Exhibit 13, Annexes XIV-XVI).
- Prepared and distributed technical booklets on agronomic practices of vegetables seed production and maize and soybean cultivation.
- Provided partial funding to three existing seed companies to improve their business skills (e.g., seed production, seed conditioning and seed marketing) through foreign training and study tours (Exhibits 14 & 15). Some other private sector entrepreneurs were also assisted to attend trade expositions (Exhibit 16).

Exhibit 13 Number of Demonstrations (includes field days), Domestic Training and International Training through June 1998 in Different Subsectors

Sector	Demonstration	Domestic training	International Training			Total
			Under USAID Funding	Under ACFDF (including MATT)	Under exclusive funding of private sector	
Seed & Field Crops	22	61	1	4	0	5
Fertilizer	102	27	1	3	3	7
Poultry	13	31	1	4	1	6
Livestock	32	20	0	1	0	1
Agroprocessing	9	11	3	3	0	6
Horticulture	14	15	1	1	0	2
Agrimachinery	12	1	0	5	0	5
Fisheries	1	4	0	1	0	1
Multi-sectoral/ General	15	17	7	13	0	20
Total	220	187	14	35	4	53

Exhibit 14 PABA Grants Provided to Different Sub-sectors through August 1998

Subsectors	Regular/Macro Grants		Micro Grants		Totals	
	No.	\$ Amount	No.	\$ Amount	No.	\$ Amount
Seed & Field Crops	1	17,700	11	30,799	12	48,499
Fertilizer	4	21,088	0	0	4	21,088
Horticulture	0	0	1	2,304	1	2,304
Agrimachinery	2	12,455	1	3,433	3	15,888
Livestock	2	5,613	7	40,766	9	46,379
Poultry	7	49,084	2	26,906	9	75,990
Fisheries	4	300	1	13,097	5	13,397
Agroprocessing	1	25,000	1	4,440	2	29,440
Total	21	131,240	24	121,747	45	252,987

Source: PABA Status Report of ATDP, October 1998.

Exhibit 15 STAMP Grants Provided to Different Sub-sectors through August 1998

Subsectors	Regular/Macro Grants		Micro Grants		Totals	
	No.	\$ Amount	No.	\$ Amount	No.	\$ Amount
Seed & Field Crops	2	10,494	10	34,903	12	45,397
Fertilizer	2	11,160	2	2,630	4	13,790
Horticulture	2	35,031	3	13,808	5	48,839
Agrimachinery	0	0	0	0	0	0
Livestock	1	4,200	3	5,414	4	9,614
Poultry	7	106,935	4	8,927	11	115,862
Fisheries	13	80,776	2	27,137	15	107,913
Agroprocessing	8	37,990	0	0	8	37,990
Multisectoral	0	0	3	13,645	3	13,645
Total	35	286,586	27	106,464	62	393,050

Source: STAMP Status Report of ATDP, September 1998.

Exhibit 16 Number of Private Sector Participants in MATT by Different Subsectors

Subsectors	Number
Seed & Field Crops	6
Fertilizer	6
Horticulture	5
Agrimachinery	8
Livestock	0
Poultry	10
Fisheries	1
Agroprocessing	11 ^a
Multisectoral	3 ^b
Skills and understanding of Agribusiness	6
Total	56

Source: MATT Status Report of ATDP, September 1998.

^aIncludes agricultural marketing.

^bIncludes agricultural policy

2.2.1.1.4 Credit (Seed and Field Crops)

- More than 3500 loans were provided by May, 1998 (Table 17).
- Total loan disbursement was Tk. 367 million. At the aggregate level (Bank's own fund and ACF combined), the share of the sub-sector was 11.4 percent of the cumulative disbursement. The average loan size was Tk. 102,000.
- More than 95 percent of the loan disbursement is short-term in nature, and most of this loan has been provided in the form of working capital.
- Loan recovery rate has been consistently 100 percent.

Exhibit 17 Number of Borrowers, Amount of Loan Disbursed, Loan Size and Repayment Rate of ACF by Sector through May 1998

Sector	Borrowers		Loan disbursed				Loan size (in 000 Tk)	Repay- ment rate (%)
	No.	%	Amount (in million Tk.)			%		
			Bank	ACF	Total			
Seed and Field crops	3598	49.58	183	184	367.00	11.35	102	100
Fertilizer	200	2.76	1119	94	1213.00	37.52	6065	91
Horticulture	22	0.30	a	a	0.45	0.01	20	100
Livestock	2196	30.26	63	60	123.00	3.80	56	83
Poultry	247	3.41	54	54	108.00	3.34	437	65
Agroprocessing	182	2.51	631	292	922.55	28.54	5069	100
Agrimachinery	340	4.68	47	46	93.00	2.88	273	100
Fisheries	469	6.46	101	101	202.00	6.25	431	70
Others	3	0.04	102	102	204.00	6.31	68000	89
Total	7257	100.00	2300	933	3233.00	100.00	445	95

a Data was available in aggregate.

Source: Team's estimates using data from ATDP and survey conducted by Credit Consultant.

2.2.1.2 Conclusions on Seed and Field Crops

- ATDP's integrated approach of identifying the constraints to greater access and use of seed at promoting seed is prudent. A wide range of issues have been identified by ATDP in the seed sector. What ATDP may consider is to focus on few of the key issues and pursue them more aggressively.
- Maize and soybean are key ingredients to help fuel the tremendous expansion in the poultry sector and are important crops in the GoB's efforts at crop diversification. But the project could put more efforts in linking these ingredients to the poultry sector through processors, traders and dealers.
- About 20% of total project expenditure has been devoted to seed and field crops subsector (Exhibit 18). Within this subsector 13,510 farmers have adopted improved technology and more than 14,000 jobs have been created (Exhibit 19). About 85% jobs have been created at farmer level and 15% at medium and large entrepreneur level. Per person year job creation incurred a cost of US\$ 14.79 (Exhibit 18). Jobs created in seed and field crops subsector account for 39% of total jobs generated by ATDP services (Exhibit 18).

Exhibit 18 Sector-wise Percentage Distribution of Project Cost and Employment generation and Average Cost Incurred to Generate Per Person Year Employment

Sector	% project cost^a	Rank by ATDP's priority^b	% contribution to employment generation	Rank by contribution to employment	Cost (US\$/person year)
Seed & Field Crops	19.8	2	39.1	1	14.79
Fertilizer	23.8	1	10.8	4	64.70
Horticulture	8.0	6	0.8	8	287.28
Agrimachinery	8.5	5	5.2	6	48.15
Livestock	8.5	5	23.5	2	10.60
Poultry	13.5	4	11.7	3	33.86
Fisheries	3.7	7	1.8	7	58.69
Agroprocessing	14.2	3	7.1	5	58.78
Total	100.0	NA	100.0	NA	29.27

a Excluding common costs.

b Priority has been defined by percentage share of project cost.

NA = Not Applicable.

Source: Team's estimates based on data provided by ATDP.

Exhibit 19 Number of Farmers Adopted Improved Technology and Jobs Created through June 1998

Sector	Improved Technologies	Number of farmers adopting improved technology through June 1998	Job in person year
Seeds and Fields Crops	Improved soybean cultivation	11,256	1,082
	Improved vegetable seed production technology	615	115
	Improved rice, wheat and jute seed production technology	382	80
	Improved potato and potato seed production cultivation	376	57
	Improved maize cultivation	881	1,958
	ACF	-	10,790
Sub-total		13,510	14,082
Fertilizer	Urea super granules (USG) technology	50,289	271
	Blended fertilizer and improved fertilizer technology (TSP/SSP)	5,000	2,613
	ACF	-	1,000
Sub-total		55,289	3,884
Horticulture	Pineapple growing technology	100	5
	Baby corn production technology	27	2
	Mango spraying and mango orchard technology	45	-
	Litchi spraying technology	42	44
	Nursery development program	24	24
	Summer Tomato production	50	1
	Okra cultivation	16	-
	Number of farmer involved for vegetable export	85	-
	Farmers of SURP involved in vegetable production	18	85
	Vegetable and fruits growers attended ATDP training and field days program	28	130
Sub-total		435	291

Sector	Improved Technologies	Number of farmers adopting improved technology through June 1998	Job in person year
Agrimachinery and Agroprocessing Equipment	Power thresher (wheat)	1,296	7
	Power thresher (paddy)	2,400	27
	Treadle pump	2,163	4
	Power corn sheller	1,200	3
	Sprayer	3,000	100
	UMB machine	-	23
	USG machine	-	4
	ACF	-	1,700
Sub-total		10,059	1,868
Livestock	Beef fattening	725	753
	Dairy farming	55	110
	Fodder cultivation	8	-
	Urea molasses block	2,000	7
	Urea molasses straw	976	-
	Bio-gas plant	13	-
	ACF	-	7,599
Sub-total		3,777	8,469
Poultry	Poultry hatchery	9	90
	Poultry farm	1,792	3,566
	Feed, premix medicine and vaccine	-	17
	ACF	-	529
Sub-total		1,792	4202
Fisheries	Fisheries farm	10	55
	ACF	-	612
Sub-total		10	667
Agro-processing	Fruits and vegetable processing	-	1,530
	ACF	-	1,020
Sub-total		10	2,550
Grand Total		84,872	36,013

Source: ATDP, 20 October 1998.

2.2.2 Fertilizer

2.2.2.1 Findings

2.2.2.1.1 Overview (Fertilizer)

There are severe deficiencies in the management of nutrients in raising crop productivity and improving soil fertility. Compared to other Asian countries, the use of fertilizer in Bangladesh is very low and this is one of the main reasons for the stagnation in yields. The unbalanced use of N, P and K, the shortage of other nutrients like Sulphur and Zinc and rapidly declining level of organic matter in the soil are the major factors responsible for the decline in soil fertility.

Total fertilizer consumption during 1996/97 was about 3.45 million mt- urea 2.41 million mt, TSP and SSP 0.69 million mt and MoP 0.35 million mt. Actual application of various types of fertilizers is disproportionate to standard NPK ratio of 1:0.5:0.5. Fertilizer use at farmer level is dominated by urea (about 70%) followed by TSP and SSP (20%) and MoP (10%) causing damage to soil structure and thereby constraining per hectare production of various crops.

Only 2.6% of the total public sector outlay for crop sector has been allocated for fertilizer and soil development for the fifth plan period, 1997-2002. To date, ATDP has spent 23% of USAID funding and 25% of ACFDF for fertilizer subsector (Exhibit 11, Figures 3 & 4).

2.2.2.1.2 Policy (Fertilizer)

Both for historical factors as well as due to present allocation of resources, ATDP has played an effective role in the promotion of fertilizer, including new technologies like USG, in Bangladesh. ATDP has been a strong advocate of minimizing government's involvement in the administering fertilizer distribution and to allow market forces to operate effectively and efficiently. ATDP has also been pushing for a phased reduction in subsidy on urea.

2.2.2.1.3 Market/Technology Information and know-how (Fertilizer)

- Through June 1998, 97% of the demonstrations and field days and more than two-thirds of domestic training organized in fertilizer subsector were on USG usage covering 19,795 participants, mostly farmers (70%, Annexes XIV & XV). Technical booklets were also distributed to promote USG. ATDP implemented most of these extension services in collaboration with DAE, NGOs like BRAC and private companies like ACI.
- Six private sector entrepreneurs were provided with partial funding for study tours and trade expositions (Exhibit 16).
- The MoA is reported to be largely dependent on ATDP's fertilizer monitoring report. There is also a good demand for information on fertilizer from research outfit like BIDS and donor agencies like World Bank, ADB, FAO and others. However, the MIS is putting more than half of their resources in monitoring fertilizer situation which constitutes only one of the

eight ATDP subsectors. It may be pertinent to point out that fertilizer monitoring was also carried out by ATDP's predecessor project FDI-II for five years.

2.2.2.1.4 Credit (Fertilizer)

- 200 loans were provided by May, 1998 (Table 17).
- Total loan disbursement was Tk. 1213 million. At the aggregate level, the share of the subsector was 37.5 percent of the cumulative disbursement. The average loan size was Tk. 6065,000.
- Loan recovery rate has been more than 90 percent.

2.2.2.2 Conclusions on Fertilizer

- Promotion of a policy idea is more effective if empirical evidence of the costs of the constraints and/or the benefits of removal of the constraints (or availability of an opportunity) is analyzed and documented. The real world problems related to subsidies in terms of shortages, kickbacks and other problems are predictable. Gathering empirical facts and documenting such phenomena conveys a more powerful message for policy reform. ATDP appears not to have undertaken many such studies. Similarly, articulating the benefits of USG use in terms of farm size, location, and other classification provides greater insights to USG's potentials.
- ATDP's catalytic role in promoting USG through GoB agencies (e.g., DAE), NGOs (e.g., BRAC), agribusiness companies (e.g., ACI Limited), fertilizer dealers and interested private entrepreneurs are worth noting. Promotion of USG has led to the development of private entrepreneurs for manufacturing USG and higher productivity within a limited area. ATDP's collaboration with these public and private organizations, including NGOs was successful. Through June 1998, more than 50,000 farmers have adopted USG (Exhibit 19). About 4,000 jobs (in person year) have been created of which nearly 80% are at farm level and the remaining 20% at small and medium entrepreneur level. Contribution of fertilizer subsector to the total jobs creation by ATDP is around 11% (Exhibit 18). However, it is to be pointed out that within the fertilizer subsector, almost all the financial and technical efforts have been devoted to the promotion of USG. Through June 1998, fertilizer subsector accounts for the highest percentage (about 24%) of project cost (Exhibit 11, Figure 2)¹³. On average, US\$ 64.70 has been spent to generate one person year employment in fertilizer subsector (Exhibit 18).

¹³ If common/joint costs are considered, fertilizer accounted for around 2.6% of USAID funding (highest among all subsectors) and 13.1% of ACFDF (second highest) (Exhibit 12, Figures 6-7).

- USG is a single-nutrient fertilizer. It does not help solve the problem of unbalanced use of fertilizer. In fact, the unbalanced use of N, P and K is one of the major factors responsible for the decline of soil fertility¹⁴.
- An impressive range of data on fertilizer are collected and collated by MIS of ATDP on a regular basis. The Ministry of Agriculture has benefited from the monitoring services on fertilizer by ATDP. Although the Ministry has begun to strengthen its in-house capacity, not enough emphasis has been given to institutionalization of these services within the MoA. The long dependence of the MoA on ATDP for the monitoring of fertilizer prices and availability should be reduced. The transfer of fertilizer monitoring and reporting activity, currently done by ATDP, to the MoA will not happen without an action-oriented time-phased withdrawal plan.

¹⁴ However, deep point placements of USG, incorporating DAP as a phosphate source, has been researched by IFDC and discussed with BARC and it is planned to incorporate this technique into ATDP's USG program.

2.2.3 Horticulture

2.2.3.1 Findings

2.2.3.1.1 Overview (Horticulture)

Agroecological condition in Bangladesh is quite suitable for production of different varieties of fruits and vegetables. Some fruits such as mango, banana, pineapple, jackfruit, etc., have demand all over the world. The main problem of fruit production is its seasonal nature. Year-round production variety is yet to be evolved. Special importance has been given during the GoB's Fifth Plan (1997-2002) to produce at least major fruits and vegetables on a year-round basis and commercialisation of their production through appropriate research and development programs. At the same time, emphasis is given on the qualitative and quantitative improvement of various fruits and vegetables production, including production of mushrooms, flowers, orchids and shrubs etc. Production of fruits and vegetables has been projected to be 3.54 million mt and 1.82 million mt respectively by the terminal year (2002) of the Fifth Plan period.

10% of USAID fund and 5% of ACFDF have been spent by ATDP on horticulture through June 1998 (Exhibit 11, Figures 3 & 4).

2.2.3.1.2 Policy (Horticulture)

The Policy Unit has focused on several means towards promotion of export of horticulture products. The major emphasis ATDP has made is towards improved air freight facilities for export of horticultural products.

2.2.3.1.3 Market/Technology Information and know-how (Horticulture)

- Most of the activities focussed on improved fruit and vegetables production and management (e.g., improved variety of pineapple including hormonal treatment, pineapple harvesting and post-harvest handling, spraying of mango and litchi trees, nursery management, production of summer tomato and baby corn) through demonstration, field days and local training (Exhibit 13, Annexes XIV & XV).
- Assisted two private companies to master production and processing technology of baby corn and orchid through foreign trips and engaging consultant. Another five entrepreneurs received partial funding for market access and technology training trips (Exhibit 16).

2.2.3.1.4 Credit (Horticulture)

- 22 loans were provided by May, 1998 (Table 17).
- Total loan disbursement was Tk. 0.45 million. At the aggregate level, the share of the sub-sector was 0.01 percent of the cumulative disbursement. The average loan size was Tk.20,000.

- Loan recovery rate has been 100 percent.

2.2.3.2 Conclusions on Horticulture

- ATDP claims to have influenced through dialogues the publicly-owned national air carrier, Bangladesh Biman, to allow additional space for perishable exportables. Such an endeavor is commendable in the backdrop of a need to expand Bangladesh's export base. However, it is unclear from ATDP's documentation the involvement of business associations and other organizations in influencing Bangladesh Biman's decisions.
- Promotion of horticulture also require removal of policy constraints which affect production and costs. In-depth look into the tariff and non-tariff issues for this sector by the Policy Unit is required.
- This subsector accounts for about 8% of project cost (Exhibit 11, Figure 2). Through June 1998, 435 farmers have adopted improved technology in this subsector and 291 jobs have been created (Exhibit 19). About 55% jobs have been created at farmer level and 45% at fruits and vegetables business activities. The average cost to create one person year job in horticulture subsector is US\$ 287.28 (Exhibit 18).

2.2.4 Livestock

2.2.4.1 Findings

2.2.4.1.1 Overview (Livestock)

The contribution of the livestock subsector to the country's GDP is around 3% and to agricultural GDP around 9%. The latter share has been rising steadily in recent years. Livestock contributes 95% of draught power to agriculture and provides full-time employment to about 20% of the rural population generating cash income for the rural poor with a small amount of investment.

The critical factors hampering the livestock industry are the shortage of conventional and non-conventional feed, lack of veterinary services and the low number of crossbred animals.

For the period 1997-2002, public sector allocation for the livestock (includes poultry) subsector accounts for 13% of the total public outlay for agriculture sector (GoB 1998). To date, ATDP's expenditure for livestock (includes poultry) subsector is around 22% of USAID funding and slightly more than 22% of ACFDF (Exhibit 11, Figures 3 & 4).

2.2.4.1.2 Policy (Livestock)

A wide array of policy issues have been identified in the Policy Matrix relating to livestock. ATDP claims to have been a positive force in inducing banks to make loans for beef fattening. Other areas of policy interventions are too general, and ATDP has been one of the many groups identifying those issues. Whether ATDP can make meaningful contributions on the general issues is questionable.

2.2.4.1.3 Market/Technology Information and know-how (Livestock)

- Supported different umbrella groups and NGOs for providing training to small farmers in improved beef and dairy cattle production (includes improved cattle nutrition and fodder crop production). UMB preparation got priority for demonstration and field days while beef fattening for domestic training (Exhibit 13, Annexes XIV & XV).
- Provided information to individual farmers on feed mixes, vaccinations, etc.
- Funded consultancy services for selection of exotic heifers and design of integrated dairy farm.

2.2.4.1.4 Credit (Livestock)

- 2196 loans were provided by May, 1998 (Table 17).
- Total loan disbursement was Tk. 123 million. At the aggregate level, the share of the subsector was 3.8 percent of the cumulative disbursement. The average loan size was Tk.56,000.

- Loan recovery rate has been 83 percent.
- Approximately one-third of total disbursement in livestock was short-term in nature.

2.2.4.2 Conclusions on Livestock

- Policy interventions recommended by ATDP in the livestock sector are either too broad for the project to address or have not been pursued too seriously. A look at ATDP's Work Plan 1998-99 reveals specific goals under livestock; e.g., increase commercial production of meat and milk (goal 1). However, the Work Plan does not offer specific policy intervention strategy to meet the goals. Greater linkage of the goals with the policy issues is suggested.
- Feed constraint should be addressed to have a greater impact on dairy production.
- There are problems in marketing milk at a fair price. This is due to lack in milk processing facilities. ATDP has not picked up on this as holding potential for development of a viable agribusiness.
- About 4,000 farmers have adopted improved technology and around 8,000 jobs have been created in this subsector (Exhibit 19). 75% of jobs created in this subsector are at farmer and small entrepreneur level (includes labor) and 25% are at medium and large enterprises.
- Livestock subsector incurred 8.5% of project cost while it is reported to account for 23.5% of total jobs creation (Exhibit 18). Cost per person year job creation appeared to be the lowest (US\$ 10.60) in this subsector.

2.2.5 Poultry

2.2.5.1 Findings

2.2.5.1.1 Overview (Poultry)

GoB has allocated 13% of agriculture sector public outlay for animal and poultry development for the period 1997-2002 (GoB 1998) while ATDP's expenditure for poultry alone through June 1998 is 12% of USAID funding and 15% of ACFDF (Exhibit 11, Figures 3 & 4).

2.2.5.1.2 Policy (Poultry)

In recent years, ATDP has witnessed from a close range the tremendous growth in the poultry sector. And ATDP claim to have been a catalyst in its success. The Policy Unit has identified a number of critical policy issues such as promotion of poultry feed through greater production of maize and soybean, reforming tariff anomalies related to feed, etc.

2.2.5.1.3 Market/Technology Information and know-how (Poultry)

- Organized field days to motivate and orient individual entrepreneurs in poultry production and management, including broiler and layer (Exhibit 13, Annexes XIV & XV).
- Provided local grants to umbrella groups or sponsors (e.g., NGOs like PAGE-Comilla) to coordinate and/or provide the training to small holders in poultry production.
- Assisted ten private sector entrepreneurs to attend specialized foreign training (Exhibit 16) on poultry production and management (includes poultry operations, sanitary practices, diagnostic laboratory).

2.2.5.1.4 Credit (Poultry)

- 247 loans were provided by May, 1998 (Table 17).
- Total loan disbursement was Tk. 108 million. At the aggregate level, the share of the sub-sector was 3.3 percent of the cumulative disbursement. The average loan size was Tk.437,000.
- Loan recovery rate has been 65 percent.
- Less than twenty percent of the poultry loans was short-term in nature.

2.2.5.2 Conclusions on Poultry

- ATDP has strong involvement in poultry. Hence a wider list of complex policy problems could have been identified and follow-up actions propounded.
- The project has made good headway in the promotion of improved poultry production and management, including bio-security. It has assisted both existing poultry farms as well as new poultry farms. The concept of model village (concentration of resources in a pocket) pursued at the Kapasia pilot zone worked well, particularly towards the adoption of improved poultry production and management techniques. The project is putting efforts to replicate Kapasia model in other field areas.
- A major constraint is the lack of diagnostic laboratories to provide diagnosis and treatment of poultry diseases.
- Through June 1998, 1,792 farmers have adopted improved technology and more than 4,000 jobs have been created in this subsector (Exhibit 19).
- Proportionate investment in poultry (13.5%) and its contribution to job creation (around 12%) are almost same (Exhibit 18). Cost incurred per person year job creation in this subsector is more than three times compared to livestock subsector.

2.2.6 Agroprocessing

2.2.6.1 Findings

2.2.6.1.1 Overview (Agroprocessing)

Bangladesh experiences seasonal surpluses in several agricultural commodities of perishable nature. Development of agroprocessing facilities can prevent post-harvest losses and enhance farmers' income. The agroprocessing industries are at present in their nascent stage of development. Most of the technologies and facilities for handling, storage, processing and packaging of farm products and by-products are substandard and outdated as they cater primarily to the domestic market. There is considerable under-utilization of capacity also.

ATDP's expenditure for agroprocessing through June 1998 accounts for 16% of USAID funding and 12% of ACFDF (Exhibit 11, Figures 3 & 4).

2.2.6.1.2 Policy (Agroprocessing)

As an incentive to agroprocessing, ATDP advocates a range of tariff reduction and concessions on inputs and also recommends certain export incentives. Tax incentives are a common request for any special interest group. The Policy Unit's tax advocacies are not backed by in-depth analysis of the net gains to the sector and to the country from such reforms.

2.2.6.1.3 Market/Technology Information and know-how (Agroprocessing)

- Conducted demonstration, field days and local training on small-scale preparation of tomato ketchup, chanachor, jam, jelly, juice etc. (Exhibit 13, Annexes XIV & XV).
- Provided partial funding to some companies for consultancy service and foreign trips to increase production capacity, develop new product lines (includes fruit drying and processing, dairy product processing, packaging technology etc.).
- Provided technical assistance (includes seed capital for initial operations) for creation of an agro-processors association.
- Organized contract growing arrangement for pineapples with a processor.
- Private sector entrepreneurs were assisted in participating in observation tours, trade expositions, specialised training and accessing markets (Exhibit 16).

2.2.6.1.4 Credit (Agroprocessing)

- 182 loans were provided by May, 1998 (Table 17).

- Total loan disbursement was Tk. 922.55 million. At the aggregate level, the share of the sub-sector was 28.5 percent of the cumulative disbursement. The average loan size was Tk.5069,000. Loan was given mainly for cold storage.
- Loan recovery rate has been 100 percent.
- Less than twenty percent of the loans disbursed in agro-processing was short-term in nature.

2.2.6.2 Conclusions on Agroprocessing

- Although ATDP advocates various tax reforms for this sector, it has not pursued in-depth or related analyses of these issues. The Policy Unit's advocacy of the tax reliefs would be more effective if they are backed by in-depth analysis of the net gains to the sector and to the country from such reforms. Comparative tax structure of, say, agroprocessing sector in India, would be an useful set of information for policy makers. Agroprocessing business associations could benefit more from technical guidance and analysis of how fiscal incentives can be justified to the government.
- Most of the activities have been on small-scale home-based processing skills training and orientation.
- 2,550 jobs have been created in this subsector through June 1998 (Exhibit 19).
- Agroprocessing subsector accounts for 14.2% of project cost and contributes 7.1% of total jobs created by ATDP services (Exhibit 18). One person year employment creation in this subsector incurred an average cost of US\$ 58.78.

2.2.7 Agrimachinery

2.2.7.1 Findings

2.2.7.1.1 Overview (Agrimachinery)

Through June 1998, 10% of USAID funding and 6% of ACFDF has been spent for agricultural machinery (Exhibit 11, Figures 3 & 4).

2.2.7.1.2 Policy (Agrimachinery)

Although ATDP has identified some general and one or two specific areas of policy interventions for agrimachinery, no major claims can be made by the Policy Unit in terms of achievement of results.

2.2.7.1.3 Market/Technology Information and know-how (Agrimachinery)

- Conducted demonstrations, field days and training on UMB machine, USG machine, power tiller etc. that involved 686 participants of which more than 70% were farmers (Exhibit 13, Annexes XIV- XVI).
- Private entrepreneurs were assisted to display their agrimachinery products (e.g., power tiller, power thresher) in agrofair.
- Eight private sector entrepreneurs were assisted to attend specialized foreign training in agricultural machinery manufacturing, specially hydraulics related issues (Exhibit 16).

2.2.7.1.4 Credit (Agrimachinery)

- 304 loans were provided by May, 1998 (Table 17).
- Total loan disbursement was Tk. 93 million. At the aggregate level, the share of the sub-sector was about 3 percent of the cumulative disbursement. The average loan size was Tk.273,000.
- Loan recovery rate has been 100 percent.
- More than sixty five percent of the total loans disbursed in agri-machinery was medium-term in nature. This is indeed in contrast to other sub-sectors.

2.2.7.2 Conclusions on Agrimachinery

- Although ATDP has identified some general and one or two specific areas of policy interventions for agrimachinery, no major claims can be made by the Policy Unit in terms of achievement of results.

- Most of ATDP's efforts in this subsector has been in demonstrating production related (e.g., tillage operations like power tiller) machineries which are already well known in the country. There is an urgent need for harvesting and post-harvesting equipment to combat harvest and post-harvest loss which the project has not addressed to any significant degree.
- More than 10,000 farmers have adopted improved technology and 1,868 jobs have been created in this subsector (Exhibit 19). More than 70% jobs have been created at farmer level (includes machine operators) and the remaining 30% at machine manufacturer and repair shop level.
- Cost for activities in Agrimachinery subsector accounts for 8.5% of project cost while its contribution to job creation is slightly more than 5% (Exhibit 18). One person year job creation in this subsector incurred an average cost of US\$ 48.15.

2.2.8 Fisheries

2.2.8.1 Findings

2.2.8.1.1 Overview (Fisheries)

Fisheries subsector accounts for about 9% of agricultural GDP and contributes about 60 percent of the nation's protein intake. It provides full time employment to about 1.2 million people and also generates part time employment for some 11 million people. About 10% of total export earnings come from fisheries. Increased production, export and creation of employment opportunities have been the main focus of development activities in the subsector over the years.

Fisheries received an allocation of 14% of the total public sector allocation for agriculture sector for the period 1998-2002 (GoB 1998). Through June 1998, ATDP has employed 3% of USAID funding and 5% of ACFDF for fisheries subsector (Exhibit 11, Figures 3 & 4).

2.2.8.1.2 Policy (Fisheries)

- The policy issues identified in the fishery area are very broad. For ATDP to initiate effective dialogue and to do follow-up activities, specific issues need to be identified.

2.2.8.1.3 Market/Technology Information and know-how (Fisheries)

- Assisted entrepreneurs to acquire and master the production technology of Rosenbergi and Thai pangus through training and consultancy services (includes designing plans for modernizing and expanding fish farm, improved hatchery management, market assessing etc.).
- Provided grant to local NGOs (e.g., Chinnomul Mohila Samity, CMS) to provide training to smallholders and extension agents in fish production.

2.2.8.1.4 Credit (Fisheries)

- 469 loans were provided by May, 1998 (Table 17).
- Total loan disbursement was Tk. 202 million. At the aggregate level, the share of the subsector was about 6.2 percent of the cumulative disbursement. The average loan size was Tk.431,000.
- Loan recovery rate has been 70 percent.
- More than seventy percent of the fisheries loan was short-term in 1996 and 1997. It came down to 50 percent in mid-1998.

2.2.8.2 Conclusions on Fisheries

- The fisheries sector has recently been added to ATDP. However, the project has provided support to a number of fisheries training programs.
- Through June 1998, 10 fisheries farms have adopted improved technology and 667 jobs have been created in this subsector (Exhibit 19).
- Fisheries activities have incurred about 8% of project cost while it accounts for around 2% of total employment created by ATDP. Creation of one person year job in this subsector required an average cost of US\$ 58.69 (Exhibit 18).

2.3 Overall Conclusions

- ATDP has contributed to the development of agribusiness in Bangladesh, although the impact to date appears to be somewhat overstated by ATDP using the agreed upon indicators.
- The overall access by the private sector to the credit, technology and information through the project has been good.
- ATDP's efforts in promoting USG, poultry and dairy through GoB agencies, NGOs, agribusiness companies and private entrepreneurs are notable initiatives of institutional collaboration.
- ATDP's introduction of model village concept for poultry has added a new dimension in the promotion of agribusiness development in the country. The model village has developed a market base for inputs and outputs which is encouraging the growth of new farms.
- The project management has some deficiencies in the areas of focus of the project, staffing, reporting, coordination and delegation of authority.
- The policy unit has made a positive contribution in the development of agribusiness, although the project's effort in policy analysis appears to a part of the Evaluation Team to be inadequate. The MoA felt that the lack of emphasis on analytical research was appropriate.
- The ACF has been a valuable source of short term financing for certain agribusinesses. However, it has had limited success in terms of creating new agribusinesses largely because of this focus on financing working capital and trading loans to existing entrepreneurs.

Chapter 3: RECOMMENDATIONS

3.1 General

3.1.1 Administration and Management

- ATDP needs to review its staff, both at headquarters and in the field, in line with a greater program focus over the remaining period of the project. It should consider recruiting some national staff with marketing, business management and finance background.
- The project would benefit if a senior level expatriate agribusiness adviser is hired to work with the CoP.
- The team believes the following suggestions should be considered for improving management and administration:
 - The Technology Unit Head should be entrusted with the responsibility of supervising and coordinating the program planning and implementation of all the subsectors under the Unit (Figure 8).
 - The CoP should delegate some administrative (e.g. travel plan of the Program Coordinators) and financial authority to Unit Heads and Program Coordinators which will free up his time for providing strategic input to the management of the project.
 - In order to streamline reporting relationship, all APOs should be placed under the supervision of the Field Office Managers.
 - The field offices should be granted some degree of delegation of authority in administrative and financial matters.
 - In a project as complex as ATDP, with so many sectors and activities, GoB, USAID and ATDP should consider undertaking the task of refining the results indicators for precision and clarity.
 - ATDP needs to refine its performance measurement system to more precisely track the benefits of all its interventions. It should be extremely careful in making claims as to results produced by the project.
 - USAID should advise ATDP not to distribute any documents such as annual reports and impact studies that make claims of beneficiaries and benefits until it (USAID) reviews and approves these reports.
 - Impact study of the project should be conducted by local independent consultants under USAID to ensure unbiased estimate of the performance of the project.

3.1.2 Policy

The evaluation team has several recommendations for strengthening the impact of the policy component of ATDP during the remaining period of its operations. Some of these recommendations have been incorporated into ATDP's Work Plan, but are worth mentioning in this report:

Dialogues: ATDP should continue its effective method of policy interventions through dialogues and seminars. The dialogues can complement Policy Briefs and other analytical exercises which the project undertakes.

Prioritization: The Policy Unit needs to prioritize policy issues and pursue with appropriate agencies to achieve final outcome i.e., the policy changes.

Policy Briefs: The Policy Unit in collaboration with the various units of ATDP, including the MIS division, should develop Policy Papers and research notes on experiences from ATDP, on policy constraints, and other issues related to agribusiness. Impact of various grants and loans under this project, such as PABA and STAMP, can be assessed and documented. The assessment can be adequately elaborate to capture the impact based on enterprises by type, size class, age, and other characteristics.

Such efforts can serve multiple purposes. First, they would complement the dialogues presently initiated by the Policy Unit. Second, the papers can capture the successes of ATDP's assistance and constraints that entrepreneurs encounter. Third, the impact of ATDP's programs on various socio-economic groups (e.g. large enterprises versus small), location and other criteria can be highlighted through such documentation. Fourth, since ATDP aims at strengthening the institutional capacity of agrobased associations, the project should guide such entities in how to use multiple methods in bringing policy changes, i.e. there are other means aside from dialogues and seminars

In the backdrop of the impending impact of the Uruguay Round global trade liberalization, the Policy Unit should consider developing a strong base on trade related issues. Using the Policy Matrix and one of ATDP's earlier research pieces on trade issues as a starting point, in collaboration with MIS unit and the other divisions, a concerted effort in developing a strong trade related database can be developed. Subsequently, analytical pieces may be developed on a regular basis during the remaining period of the project.

The Policy Unit should undertake analytical exercises, which captures the impact of the ATDP programs on disaggregated target groups. It also could, in association with the MIS unit, and other components, identify and document the contributions of other development partners on ATDP-type issues or programs.

For instance, the Policy Unit can be more effective if its dialogues and seminars are complemented by in-house documentation of the issues and dissemination of findings. The Policy unit and MIS should work more closely. The MIS unit could benefit from the Policy unit in terms of improving the quality of the data collection effort. Concurrently, the policy unit could undertake more analysis using the MIS data.

Fertilizer: ATDP should attempt to capitalize on the rich data that is generated regularly, and produce reports which captures the direct impact on poor farmers -- the ultimate customers and targeted recipient of the subsidies. The project should gradually phase out of monitoring the fertilizer market, and encourage the MoA to rely on its in-house capacity.

Documentation of Results: The MIS unit should develop stronger linkage with the various components (divisions) of ATDP. Presently the impact are quantified in terms of number of businesses benefitting in terms of employment and income. Impact by entrepreneur's background, employment size class, location are also possible with little additional effort. The socio-economic impact of the ATDP interventions can be better documented through empirical analysis (much of the data is being collected already). In addition, wherever possible, it would be useful to know if other projects, organizations have contributed to activities and policy reforms which ATDP is promoting. Acknowledgement of the contributions of others would allow a more realistic assessment of the impact of ATDP. It would also, in many instances, demonstrate the usefulness of this project as part of a collective force in bringing improvements to the agribusiness sector.

Business Associations and NGOs: The Policy Unit should assist agribusiness associations in developing their in-house policy advocacy, research and analytical capabilities. It can work closely with the MIS unit and the various other departments of ATDP in enhancing the policy component of the agribusiness associations in order to make them more effective and sustainable.

Policy Unit's Staffing: Although ATDP is fortunate to have an effective Senior Policy Advisor, the Policy Unit is under-staffed in terms of technical capacity. Relying on short-term consultant for certain policy briefs may not be adequate. However, there is a strong need of full-time in-house specialists to enhance the analytical capability. Greater input from the Policy Unit is necessary in strengthening the MIS data collection endeavors and in complementing other department's activities. The proposed Work Plan for 1998-99 identifies a wide range of activities. The Policy Unit should not rely on short-term consultants only to implement those activities; one or more full-time policy analysts and advocates are required for effective implementation.

3.1.3 Technology

- The Report on ‘Technology Needs Assessment’ should be updated and a concomitant market assessment exercise is to be carried out.
- ATDP should establish six technology-cum-marketing service centers with adequate technical and logistical support rather than currently attempting to serve too many thanas in too many districts. (The MoA, however, feels that the offices in Sylhet and Barisal should continue as those areas have the potential for agribusiness).
- With limited resources, it would make sense for each service center to select 2-3 priority subsectors that have the greatest potential for development in a particular area rather than covering eight subsectors (Exhibit 20).

Exhibit 20 Suggested Service Centers and Priority Sectors

Existing			Suggested		
Field Office	Districts	Sectors/Subsectors	Service Center	Districts	Sectors/Subsectors (arranged in order of priority)
Dhaka-HQ	Dhaka, Narsinghdi, Narayanganj, Manikganj, Munshiganj	Seed & Field Crops, Fertilizer, Horticulture, Agrimachinery, Livestock, Poultry, Fisheries, Agroprocessing	Dhaka	Dhaka, Gazipur, Tangail	Agroprocessing, Horticulture, Poultry, Fertilizer (Specially blended fertilizer)
Kapasia	Gazipur, Tangail	-Do-	Proposed merging with Dhaka	NA	NA
Rangpur	Rangpur, Gaibandha, Kurigram, Lalmonirhat, Nilphamari, Dinajpur, Thakurgaon, Panchagarh, Bogra,	-Do-	Rangpur	Rangpur, Dinajpur	Seed & Field Crops, Dairy

Existing			Suggested		
Field Office	Districts	Sectors/Subsectors	Service Center	Districts	Sectors/Subsectors (arranged in order of priority)
	Joypurhat				
Jessore	Jessore, Magura, Narail, Jhenaidah, Khulna, Bagerhat, Satkhira, Kushtia, Chuadanga, Meherpur	-Do-	Jessore	Jessore, Kushtia	Horticulture, Seed & Field Crops
Chittagong	Chittagong, Cox's Bazar, Chittagong Hill Tracts, Khagrachari, Banderban, Feni, Noakhali, Laxmipur, Comilla, Chandpur	-Do-	Chittagong	Chittagong, Rangamati, Banderban	Poultry, Horticulture
Sherpur	Sherpur, Jamalpur, Mymensingh, Netrokona, Kishoreganj	-Do-	Sherpur	Sherpur, Jamalpur	Horticulture
Rajshahi	Rajshahi, Chapai Nawabganj, Natore, Naogaon, Pabna, Sirajganj	-Do-	Rajshahi	Rajshahi, Chapai Nawabganj	Agroprocessing, Horticulture

Existing			Suggested		
Field Office	Districts	Sectors/Subsectors	Service Center	Districts	Sectors/Subsectors (arranged in order of priority)
Sylhet	Sylhet, Sunamganj, Moulvi Bazar, Hobiganj, Brahmanbaria	-Do-	Proposed to drop	NA	NA
Barisal	Barisal, Bhola, Jhalokathi, Perojpur, Patuakhali, Barguna, Faridpur, Gopalganj, Sariatpur, Madaripur, Rajbari	-Do-	Proposed to drop	NA	NA

NA = Not Applicable

- For each of the proposed service centers, technology needs assessment, prioritization of the selected technologies and identification of potential entrepreneurs need to be carried out prior to the preparation of workplan.
- Develop technology transfer module for the priority technologies.
- Increase the number of private sector participants in the priority training programs.
- ATDP should channel greater amount of resources to the development of new agribusinesses as opposed to existing ones.
- Training should not be provided without doing prior assessment of needs. Training program should be designed based on the assessment of needs. There should be follow-up after the training. ATDP should try to find out what other assistance is needed (e.g., finance, marketing etc.) to put the training into effective use.
- Complete package of services, starting from production to marketing, should be emphasized rather than just providing production technology oriented extension services.

- There should not be separate groups and separate managers for the three different grant programs. The Team believes that one office headed by one manager with supporting staff would be more effective and efficient. In addition, this should lead to a substantial reduction in grant processing, administration and management costs.
- ATDP should consider engaging an entity to act as an umbrella organization to provide small/micro grants for small farmer skills training. This would be much more cost effective than running these grants through the project¹⁵.

¹⁵ Some other detailed recommendations on different grants are presented in Annex XVII.

3.1.4 Credit

During the next fourteen months of the project, the credit component should:

- Implement the project in selected districts;
- Be specific about project objectives;
- Restrict or limit working capital/trading loans;
- Provide incentive to the bankers for better use of the fund in achieving the ultimate objective of the project;
- Make Bangladesh Bank more active in management of the ACF.

3.2 Recommendations by Sector

3.2.1 Seed and Field Crops

- ATDP should increase its direct assistance to seed companies to upgrade their technical (includes seed processing, preservation and marketing) and managerial capacity.
- Linkages of crop sector (e.g., Maize and soybean) with non-crop sector (e.g., poultry) should be strengthened in the agribusiness promotion strategy of ATDP.

3.2.2 Fertilizer

- ATDP should promote the use of blended fertilizer to ensure that farmers are adopting the proper balance of nutrients. However, emphasis on fertilizer blending per se must be preceded by efforts to enact fertilizer regulations to control potential adulteration and other illegal practices that can be easily incorporated into fertilizer blending operations.
- ATDP will develop and submit to Project Steering Committee, by 20 February 1999, a plan to transfer the fertilizer monitoring and reporting activity to the MoA before the terminal date of the ATDP (31 January 2000). This turnover plan should provide a clear time-table, beginning with 22 February 1999, and a series of actions to ensure that this takes place - or to at least ensure that ATDP has done all in its power to make this transfer a reality. This transfer will allow the MIS of ATDP to focus on other subsectors.

3.2.3 Horticulture

- Linkage of horticulture subsector with agroprocessing subsector should get due consideration in horticultural activities.

3.2.4 Agrimachinery

- ATDP should focus on post-harvesting equipment over the remaining LoP. However, these activities could be accommodated within agroprocessing subsector and staffing of this (Agroprocessing) subsector should be reviewed.

3.2.5 Livestock

- ATDP should give more emphasis on commercial production of feed and fodder crops.
- There should be more focus on dairy processing and marketing along with dairy farming. Beef fattening should be dropped.

3.2.6 Poultry

- ATDP should consider focusing on the development of facilities in the private sector for diagnosis and treatment of poultry diseases. Information should be disseminated on disease diagnosis.
- Hatchery development and broiler processing should get high priority.

3.2.7 Fisheries

- ATDP should focus on fish processing over the remaining period of the project. However, the activity can be integrated into agroprocessing subsector. Therefore, it is recommended that ADTP should get out of fisheries subsector.

3.2.8 Agroprocessing

- ATDP should promote and develop the vertical integration of production from farm to industry, based on such mechanisms as contract farming so as to reduce the price risk for the farmer and the supply risk for the processing unit. The necessary institutional mechanism to sustain such integration should be developed and implemented.

DETAILED TERMS OF REFERENCE FOR THE EVALUATION TEAM

Scope Of Work - Evaluation

Agrobased Industries and Technology Development Project (ATDP)

Purposes:

- 1) to evaluate the impact of ATDP, including the Agriculture Credit Fund (ACF) to date;
- 2) to recommend possible ways, if any, in which the project might increase the impact of its services over its remaining life; and
- 3) to help guide future USAID programming decisions in agriculture and agricultural finance.

Background:

1) Objectives of the project: The stated purpose of ATDP is to "increase productive employment in agriculture and related enterprises through the creation of competitive markets for agricultural and agribusiness inputs, outputs and technologies." Within this overall purpose are three intermediate, or supporting objectives:

- Improved policy environment.
- Transfer of improved technologies and information to agribusinesses.
- Increased investment in agribusiness.

2) Services: The project provides information, managerial and technical know-how, and credit to the following types of agribusinesses, which are specifically targeted for project assistance:

- agro-processing;
- horticulture;
- fish, poultry, and livestock;
- agricultural machinery;
- seeds;
- fertilizer;

In addition, ATDP delivers similar services to other businesses, which are suppliers of those, listed above, including:

- packaging industry;
- livestock feed (e.g. urea molasses block, a feeding supplement for livestock).
- poultry feed grain farmers and mills;

Finally, ATDP also furnishes information and managerial and technical know-how to Government of Bangladesh policy makers and bankers.

3) Locations: The project provides services throughout the country. The implementation contractor, IFDC, has established a headquarters office in Dhaka, major branch offices ("pilot zones") in Kapasia, Rangpur, Jessore, and Chittagong, and sub-branch offices ("subpilot zones") in Barishal, Sherpur, Barishal, and Rajshahi. Credit is provided through local bank branches throughout the country.

4) Funding summary:

USAID	: \$ 10.0 million
GOB	: \$ 26.0 Agricultural Credit Fund (ACF)*
	\$ 3.0 agribusiness promotion (ACF interest)
	\$ 1.7 custom duty/VAT and FDI II assets
Total	: \$ 40.7 million

*sales from USAID Fertilizer Development Improvement (FDI) Project.

5) Project implementation period: January 1995 to January 2000

6) Implementation arrangements: Most of the project 'technical' services are provided through a contract between USAID and the International Fertilizer Development Corporation (IFDC), which also advises the Ministry of Agriculture on the management of an agribusiness promotion fund that is financed by interest reflows from the Agricultural Credit Fund (ACF). Credit is furnished through local banks, which are in turn financed through the Agricultural Credit Fund. The latter fund is managed by the Bank of Bangladesh (central bank) with advice and assistance from an ACF Committee composed of representatives of the Ministries of Agriculture and Finance, USAID, and IFDC.

All project activities are implemented in close coordination with the Ministry of Agriculture, which acts as the lead Government of Bangladesh coordinating agency for the project. In addition, the project works with the Ministries of Industry, Commerce, and Finance, NGOs, trade associations, the Export Promotion Bureau, and Chambers of Commerce and Industries.

Questions for Evaluation Team:

Evaluation questions are organized according to the three major objectives of the evaluation.

1. Impact to Date:

- What have been the benefits of the ATDP to date in terms of increased income and job creation?
- To whom have such benefits accrued (e.g. agribusiness owners, including farmers, laborers, consumers)?

- What has been the cost of ATDP services (information, managerial and technical skills transfer, and credit) to date, and how do they compare with the benefits?
- What services have had the most impact, and in what sectors and regions? The least? (in order to answer these questions, evaluators should first quantify the costs and benefits to date according to the type of ATDP services provided, the business sectors, and the geographic areas served.)

2. Opportunities for ATDP:

- Over its remaining life, which products and services, sectors and geographic areas are most likely to contribute to income growth and job creation?
 - How can ATDP best ensure the long term sustainability of activities supported by the project?

3. Opportunities in Agriculture after ATDP:

Within the field of agribusiness (broadly defined as including all agricultural related activities except subsistence farming) what activities should USAID support after the completion of ATDP in the year 2000?

Terms of Reference for Private Agribusiness Specialist (Expatriate)

Within the overall scope of work and framework developed for the evaluation of Agrobased Industries and Technology Development project (ATDP), Private Agribusiness Specialist will examine and evaluate the extent of project's success in creating necessary conditions for private agribusiness development in the following eight subsectors: agro-processing, horticulture, agricultural machinery, seeds, fertilizer, fisheries, poultry and livestock. Under the domain of the overall assignment, expatriate consultant, in close coordination with other Evaluation Team Members, will perform specifically the under mentioned supportive tasks:

- Review relevant reports, documents and data developed under the ATDP project.
- Review effectiveness of the project activities in identifying policy constraints and analyzing the impact of policy decisions (the costs of policy constraints and the benefits of their removal) on private agribusiness (markets, prices, technology transfer, credit, import and export opportunities) and make aware policy planners and decision-makers about the constraints and to act on accordingly.
- Examine project's implementation strategies and institutional collaborations (with government, non-government, business network partners) for the development of private agribusiness enterprises.

- Assess access by the private agribusiness entrepreneurs (old and newly established) to three key resources: credit, technology and information as a result of project's interventions; and review sustainability of such access.
- Address global issues that are likely to be the concern for the project to adjust its activities for private agribusiness development in Bangladesh.
- Examine scope of improvements in project activities and mode of operations for the rest of the project period based on the findings of the aforementioned tasks.
- Review scope for continuation of agribusiness project activities beyond January 2000.
- Prepare a report highlighting conclusions and recommendations drawn from the findings on the above tasks.
- Any other relevant task as advised by the Evaluation Team Leader.

Specific Questions for Financial Markets Consultant

The Financial Markets Consultant shall focus specifically on the credit component of the ATDP, also referred to as the Agricultural Credit Fund, its relationship to the other two (information and technical know-how) components of the project, and its contribution to the overall impact of the project. Specifically, the Financial Markets Consultant shall answer the following questions.

1. How do the terms offered under the ACF compare with the terms offered under other loan programs? Are there subsidies involved in ACF loans? If so, how much and what are their implications for the sustainability of ACF? for the investments funded under ACF? What are the implications for ACF of the use of loan interest payments for technical assistance and training through the "Development Fund"? Is it in line with the credit norms and policies practiced in Bangladesh?
2. How does the rate of disbursement of funds under the ACF compare with the rates for other donor-funded projects? for the banks' own loanable funds? What are the reasons for differences, if any? The reasons for differences should cover both financial and non-financial factors. What are the impacts of ATDP training on bank officials for better understanding of the agricultural sector and making loans to farmers and in agribusiness.
3. As ACF is a revolving loan fund, are the loan repayment monies readily available for disbursement to farmers and agribusiness.?
4. To what degree have the services provided by ATDP to borrowers, such as training, technical assistance and information, been a factor in the lending decisions of banks? Are the banks more willing to lend to an enterprise that is receiving assistance from ATDP than

one that is not? What kinds of ATDP services are most important in the lending decisions of banks?

5. How do repayment rates to banks under their ACF loans compare with those under other special programs? Bank's own loanable funds? What are the reasons for differences, if any?
6. What has been the impact of the ACF to date in terms of expanded income and employment (segregate such impacts by credit characteristics and borrower characteristics, especially the eight subsectors in which ATDP operates)?
7. If there are problems with the ACF, to what extent are these problems attributable to shortcomings in the original design? to execution of the program?
8. What changes, if any, should be made in the ACF between now and the end of the activity?
9. Should the ACF be continued after the conclusion of the current ATDP? If so, what changes should be made, if any? To what extent would banks continue to make loans to agribusiness without ACF?
10. What other actions could be undertaken in the future to improve the way in which investments in agriculture and agribusiness are financed? (such activities might include actions that increase the efficiency of financial markets, as well as other actions that encourage local and foreign investment)?
11. What are the implications of the risk fund in ACF for the borrowers and bankers? Is 1% of the sanctioned (loan) money a reasonable amount for risk fund?
12. ACF participating banks were to lend one taka of their funds for each taka of ACF funds to increase the total amount of funds available through the program. Have the banks met this goal? Have they exceeded the goal, and if so, what is the ratio, i.e., 1:1.25.

Report:

The report should clearly present and identify findings, conclusions, and recommendations for each of the areas of inquiry listed under the "Questions" section of this scope of work. In the context of this evaluation the terms, "findings", "conclusions", and "recommendations" have the following meanings:

1. Findings: Factual information which is independently verifiable, directly relevant, and both necessary and sufficient to draw conclusions.

2. Conclusions: Judgments that are based on the findings and evaluators' own knowledge and experience, and that represent the evaluators' best answers to each of the evaluation questions.

3. Recommendations: The evaluator's best judgments about how to improve the project and/or increase the impact of USAID investments in agribusiness.

Methodology:

In order to answer the evaluation questions, the evaluators shall, at a minimum, conduct the following activities;

1. Review reports, documents and data related to ATDP and the ACF. Based on these documents develop and/or verify the following information: number and volume of loans by participating bank, sector, geographic area, size of borrower, size of loan, term of Loan (i.e. short term, medium, long), by repayment history,
2. Verify the accuracy of a small sample of data from ATDP reports.
3. **Review, as necessary, other documents related to agriculture, agribusiness, finance and investment in Bangladesh.**
4. Interview officials of USAID, the Government of Bangladesh, the Bangladesh Bank, participating commercial banks, the International Fertilizer Development Center (IFDC), recipients of ATDP assistance, and beneficiaries of ATDP activities.

Term of Evaluation:

Start: September 17, 1998;

Draft Report: October 4, 1998;

Final Report (ACF) October 8, 1998

Comments received from USAID,
Government of Bangladesh,
and IFDC: October 11 1998;

Final Report: October 18, 1998.

Evaluation Team (team function, name, position title, organization):

- 1) Team Leader: Dr. Mohammed Shahidur Rahman Bhuiyan, Agricultural Economist, USAID Food Security Team.
- 2) Economist: Dr. Najmul Hossain, Business Economist, USAID Food Security Team.

- 3) Agriculture Economist: Mr. Syed Motahar, Agriculture Economist, USAID.
- 4) Government of Bangladesh Representative: To be determined.
- 5) Private Agribusiness Specialist: Expatriate with private sector experience in agribusiness.
- 6) Financial Markets Consultant

Roles and Responsibilities:

The Financial Markets Consultant shall report to the Team Leader for the evaluation of the ATDP and liaise closely with other members of the ATDP evaluation team including Richard Rousseau of FST.

Annex II

DOCUMENTS AND REPORTS REVIEWED BY THE EVALUATION TEAM

ATDP/IFDC Documents

Special Impact Study Report. 13 September 1998.

Technology Needs Assessment. December 1995.

Technology Transfer Modules (Part 1). 11 May 1996.

Technology Transfer Modules (Part 2). July 1996.

Annual Report, May 1995 through June 1996. 8 September 1996.

Annual Report, July 1996 through June 1997. 18 August 1997.

Annual Report, July 1997 through June 1998. 6 September 1998.

Project Monitoring and Progress Report (Quarterly) April through June 1997. 14 August 1997.

Project Monitoring and Progress Report (Quarterly) April through June 1998. 9 August 1998.

Monthly Agricultural Input Market Monitoring Report, September 1998. 15 October 1998.

Annual Work Plan of CPZ July 1998 through June 1999. 4th June 1998.

Project Management and Operations Manual for ATDP. June 1995.

Procedures for Selection of Participants and Arrangements of Funds for the Overseas Training and Study Tour Programs under the Agribusiness Credit Fund Development Fund (ACFDF). 8 September 1996.

Quarterly Progress Report January Through March 1998 Chittagong Pilot Zone. 1st April 1998.

Staff Positions of USAID Fund and Agribusiness Credit Fund Development Fund (ACFDF). 20 September 1998

Proceedings of the National Workshop on Urea Super Granules (USG) and Sustainable Agriculture in Bangladesh. 16 August 1998.

Pre-feasibility Study Report Business Plan & Project Proposal on Dairy, Poultry. 20 May 1997.

Status of PABA Grant as on 31 August 1998.

Policy Issues Related to Agribusiness Development in Bangladesh, October 1997. July 1998. Prepared by Policy Unit of ATDP.

Policy Changes Made Relevant to Some of the Policy Issues Identified by ATDP, September 1998; Prepared by Policy Unit of ATDP.

Other Documents and Reports

The Fifth Five Year Plan, 1997-2002. Planning Commission, Ministry of Planning, Government of Bangladesh, Dhaka. March 1998.

Government Policy, Markets and Food Security in Bangladesh. Paper prepared by Carlo del Ninno and Paul Dorosh, for World Bank. March 1998.

Follow-up to Bangladesh Agriculture Sector Review. Food and Agriculture Organization of the United Nations, Rome, August 1994.

CHECKLIST USED FOR DISCUSSION WITH ATDP PROFESSIONAL

What is your idea about the objectives of this project?

How your component is helping to achieve those project objectives?

What is your role in your component? How do you play that role?

Have you received your ToR? When? Can you explain it? What activities in your ToR you have done?

To date what contributions you have made in the achievement of project objectives? What are they? If some of them are visible, please show us.

Do you visualize any problem in performing your activities in the project? What solution you see feasible?

What are your suggestions for better performance of this project?

AGRIBUSINESS ENTERPRISE QUESTIONNAIRE

Respondent: _____
 Title: _____
 Organization: _____
 Address: _____
 Telephone: _____
 Date: _____

1. When was your firm established? What does your firm produce and/or market? How many technical/supervisory personnel and how many production personnel do you employ?
2. Are your operations hindered by not being able to obtain enough raw material (e.g., fresh fruits and vegetables), ingredients, or packaging materials? If so, what are your constraints and how might ATDP assist you overcome some of these constraints?
3. How and when did your firm become aware of the ATDP program?
4. When did your firm first collaborate with the ATDP program? What activity did this involve? What were the achievements that resulted from this activity? How many persons benefited from this activity? How many new employees, if any, did you hire based on an activity carried out with support from ATDP?
5. What additional collaboration (s) has your organization had with ATDP since then? Activities? Results? No. of new employees?
6. Which ATDP programs are you:

	AWARE OF	HAVE UTILIZED
a. STAMP	_____	_____
b. MATT	_____	_____
c. PABA	_____	_____
d. ACF	_____	_____
e. INFOMAT	_____	_____
7. What is your assessment of the assistance your firm received from ATDP and/or your assessment of the collaboration between your firm and ATDP?
8. What is your assessment of the technical qualifications of the ATDP professional staff you have been involved with?
9. Do you receive the ATDP's *Agribusiness Bulletin* on a monthly basis? If so, do you find this bulletin of value in your work? How many persons review the copy that you receive?

10. ATDP has prepared studies on a range of topics related to agricultural production, processing and marketing including: a) Cattle nutrition and fodder crop production; b) Trade policy of selected agrobased products produced by Bangladesh processors; and c) Dehydration of fruits and vegetables in Bangladesh.

Have you received copies of any ATDP generated reports? If yes, which one (s) did you receive? Have they been of value to your organization in its activities? If so, in what respect have they been of value?

11. Do you have any suggestions as to how the ATDP Program could be modified to be of greater assistance to your organization in striving to reach the project's goals of increasing productive employment in agriculture and related enterprises through the creation of competitive markets for agricultural and agribusiness inputs, outputs and technologies?

This question is asked in the context of three ATDP supporting objectives of:

- a) Improved policy environment;
- b) Transfer of improved technologies and information to agribusiness's; and
- c) Increased investment in agribusiness.

12. Do you have any other observations or comments about the ATDP and/or the goals of the project?

**QUESTIONNAIRE FOR GOVERNMENT ORGANIZATIONS
AND NON-GOVERNMENT ORGANIZATIONS**

Examine project's implementation strategies and institutional collaborations (with GOs, NGOs) for the development of private agribusiness enterprises.

Respondent: _____

Title: _____

Organization: _____

Division: _____

Date: _____

1. How and when did your organization become aware of the ATDP program?
2. When did your organization first collaborate with the ATDP program? What activity did this involve? What were the achievements that resulted from this activity?
3. What additional collaboration (s) has your organization had with the ATDP since then? Activities? Results?
4. What is your assessment of the assistance your organization received from ATDP and/or your assessment of the collaboration between your organization and ATDP?
5. What is your assessment of the technical qualifications of the ATDP professional staff you have been involved with?
6. Do you receive the ATDP's *Agribusiness Bulletin* on a monthly basis? If so, do you find this bulletin of value in your work?
7. ATDP has prepared studies on a range of topics related to agricultural production, processing and marketing including: a) Cattle nutrition and fodder crop production; b) Trade policy of selected agrobased products produced by Bangladesh processors; c) Dehydration of fruits and vegetables in Bangladesh.

Have you received copies of any of these reports? If yes, which one (s) did you receive? Have they been of value to your organization in its activities?

8. Do you have any suggestions as to how the ATDP Program could be modified to be of greater assistance to your organization in striving to reach the project's goals of increasing productive employment in agriculture and related enterprises through the creation of competitive markets for agricultural and agribusiness inputs, outputs and technologies? This question is in the context of three ATDP supporting objectives of :
 - a) Improved policy environment;

- b) Transfer of improved technologies and information to agribusiness's; and
- c) Increased investment in agribusiness.

Annex VI

LIST OF PERSONS CONSULTED

ATDP Head Office, Dhaka

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Dr. M. Hassanullah	Seed Program Coordinator & Senior Specialist (Technology Unit)	Technology Unit, ATDP Head Office, Dhaka	08/27/98, 08/30/98, 09/02/98
Mr. Md. Saiful Alam	Assistant Program Officer (APO)	Fertilizer Program, ATDP Head Office, Dhaka	08/11/98
Mr. Ashraf-e-Alam	Agronomist	Fertilizer Program, ATDP Head Office, Dhaka	08/11/98
Mr. Khondoker Makbul Elahi	Field Monitoring Officer	Fertilizer Program, ATDP Head Office, Dhaka	08/11/98
Mr. Md. Mofizul Islam	Senior Specialist and Fertilizer Program Coordinator	ATDP Head Office, Dhaka	08/11/98 & 08/12/98
Ms. Fahmida Shireen	Horticulturist	Horticulture Program, ATDP Head Office, Dhaka	08/12/98
Mr. Shamim Hossain	APO	Horticulture Program, ATDP Head Office, Dhaka	08/12/98
Mr. Syed R. Kabir	Horticulture Program Coordinator & Import Export Market Development Specialist	ATDP Head Office, Dhaka	08/16/98

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Mr. Md. Shahjahan Ali Pramanik	Mechanical/Agricultural Engineer	Agrimachinery, ATDP Head Office, Dhaka	08/13/98, 09/15/98
Mr. Subash Chandra Paul	Mechanical/Agricultural Engineer	Agrimachinery, ATDP Head Office, Dhaka	08/13/98
Mr. AKM Saiful Islam	APO	Agrimachinery, ATDP Head Office, Dhaka	08/13/98
Mr. ABM Anwar Hossain	Chief Engineer & Agrimachinery Program Coordinator	ATDP Head Office, Dhaka	08/26/98
Dr. S.Z. Anwarul Quader	Assistant Specialist	Livestock Program, ATDP Head Office, Dhaka	08/16/98
Mr. Nadiruzzaman Mahmood	APO	Agrimachinery, ATDP Head Office, Dhaka	08/13/98
Mr. Zillur Rahman	Animal Nutritionist	Livestock Program, ATDP Head Office, Dhaka	08/16/98
Mr. Ashek Mahfuz	Assistant Specialist and Agroprocessing Program Coordinator	ATDP Head Office, Dhaka	08/25/98, 08/27/98
Dr. Mahmudul Karim	Fisheries Program Coordinator & Senior Specialist	ATDP Head Office, Dhaka	09/16/98
Mr. Malik Akhtar Hamid	Deputy Specialist	Credit Unit, ATDP Head Office, Dhaka	08/19/98
Mr. Syed Mesbah-ul-Alam	Field Monitoring Officer	Credit Unit, ATDP Head Office, Dhaka	08/10/98
Ms. Shahana Khondaker	Credit Monitoring Officer	Credit Unit, ATDP Head Office, Dhaka	08/10/98
Dr. M.R. Khan	Specialist (Credit and Investment) & PABA Manager	Credit Unit, ATDP Head Office, Dhaka	08/27/98

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Dr. M. Abdullah	Senior Specialist	Credit Unit, ATDP Head Office, Dhaka	08/27/98
Dr. Meer Musharraf Hussain	Consultant, Seed Potato & Field Crops	ATDP Head Office, Dhaka	08/31/98
Ms. Kiswara Begum	Assistant Specialist, Enterprise Development	Technology Unit, ATDP Head Office, Dhaka	08/10/98
Mr. Syed Jaglul Pasha	Specialist, Administration & Training and MATT Manager	Administration Unit, ATDP Head Office, Dhaka	09/07/98
Ms. Sharifa Khan	Deputy Specialist	MIS Unit, ATDP Head Office, Dhaka	08/24/98
Mr. Md. Ruhul Amin Molla	Data Management Coordinator	MIS Unit, ATDP Head Office, Dhaka	08/24/98
Dr. Ronald P. Black	Chief of Party	ATDP Head Office, Dhaka	08/25/98 (Check)
Ms. Begum Nuron Nahar	Assistant Specialist, Women in Development	Technology Unit, ATDP Head Office, Dhaka	08/10/98
Mr. Irshadul Haq	Senior Advisor	ATDP Head Office, Dhaka	09/16/98
Dr. Gordon MacEachern	STAMP Manager & Technical Editor	ATDP Head Office, Dhaka	08/31/98
Ms. Ishrat Jahan	Deputy to the COP & Senior Specialist (MIS) & INFOMAT Manager	ATDP Head Office, Dhaka	08/24/98
Mr. Md. Maksudur Rahman	Coordinator	IFDC, Dhaka	00/00/98

ATDP Field Office, Barisal

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Mr. Md. Nurul Islam Khan	General Manager	Bangladesh Krishi Bank (BKB), Division Office, Barisal	07/02/98
Mr. Md. Nurul Huda Chowdhury	Deputy General Manager	BKB, Divisional Office, Barisal	07/01/98
Mr. Rafiqul Islam	Assistant Specialist	ATDP Regional Office, Barisal	07/01/98
Mr. Shahidul Islam Gazi	Poultry Farm Owner	Billoabari, Kasipur, Barisal	07/01/98
Ms. Momtaz Begum	Poultry Farm Owner	Garurhat, Kaonia, Faruk Manzil, Barisal	07/01/98
Mr. Chowdhury Shahidul Islam	Nursery Owner	Sikor Nursery, Puran Koila Ghat, Palaspur Bridge, Barisal	07/01/98
Mr. A. Basher Khan	Director	Social Organization Development, a local NGO, Barisal	07/01/98
Mr. Sharif Zakir Hossain	Poultry Farmer	Bakerganj, Barisal	07/02/98
Mr. Abdul Wahid Hawlader	Manager	Bangladesh Krishi Bank, Bakerganj Branch, Barisal	07/02/98
Mr. Chowdhury S. Islam Saki	Nursery Owner	Shikarr, Barisal	00/00/98
CHECK	General Manager	Bangladesh Bank, Barisal	07/02/98
ATDP supported poultry, nursery and fruit entrepreneurs	Private Owners	Barisal and Pirojpur Districts	Check

ATDP Field Office, Kapasia

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Mr. Rafiqul Islam	Poultry Farm Owner	M/s Moon Poultry Complex, Sreepur, Gazipur	07/09/98
Dr. Munshi Nurul Haque	Senior Assistant Specialist, Animal Production	ATDP Pilot Zone Office, Kapasia	07/20/98
Mr. Abul Hashem	Poultry Farm Owner	Ma Poultry, Vill. Darimadan, Uni. Durgapur, Tha. Kapasia	00/00/98
Mr. Md. Alauddin	Baby Corn Grower	Vill. Jamirar Char , Union: Union: Kapasia	07/21/98
Mr. Shah Alam	Agrimachinery Enterprise owner	Nur-e-Alam Enterprise, Kapasia	07/22/98
Mr. Md. Abdus Salam	ATDP Staff	Shuhag Shamaj Kallyan Shangtha, Alipur, Daldwar, Tangail	07/22/98
Mr. Aminur Rahman	Manager	Nizam Traders, Tangail	07/22/98
Mr. A.S.M. Aktaruzzaman	Owner	Hira Enterprise, Tangail	07/22/98
Mr. Nazim	Proprietor	Nazim Engineering Akbar Auto Engineering, Adalat para, Tangail	00/00/98
Mr. Md. Abdul Barek	Farmer-cum-Retailer (USG)	Quasba, Atia Union, Deldwar Thana, Tangail	07/22/98
Mr. Md. Shakim	Farmer/USG User	Quasba, Atia Union,	07/22/98

Official(s) Visited	Designation	Organization(s)	Date of Consultation
		Deldwar Thana, Tangail	
Mr. Liaquat	Association Executive	Bangladesh Fertilizer Association, Tangail	07/22/98
Mr. Ibrahim Khalil	Deputy Director	DAE, Tangail	07/22/98
Mr. Abdus Salam	Assistant Program Officer, Fertilizer	ATDP, Tangail Area	07/22/98
Mr. Abdul Halim Sarker	Proprietor	Fertilizer Dealer, Tangail	07/22/98
Mr. Nazim	Proprietor	Nazim Engineering, Tangail	07/22/98
Mr. Liakat Hossain	USG Manufacturer- cum-Supplier	Bashar Thana, Tangail	07/22/98
Mr. Md. Tofazzal Hossain	Manager, Hasina Enterprise	Shohag Social Welfare Organization, a local NGO, Alalpur, Deldwar, Tangail	07/22/98

ATDP Field Office, Rangpur

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Dr. Tajul Islam	Zonal In-charge	ATDP Pilot Zone, Rangpur	07/28/98
Mr. S. M. Shaheen Anwar	Assistant Specialist, Agriculture	ATDP Pilot Zone, Rangpur	07/28/98
Mr. Chandan Kumar Sarker	Assistant Program Officer, Seed & Field Crops	ATDP Pilot Zone, Rangpur	07/30/98
Mr. Sarwar Alam Chunno	Poultry Farm Owner	Nilkantha, Pourashava, Rangpur	07/29/98

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Mr. Rezaul Haque Batu	Poultry Farm Owner	Nilkantha, Pourashava, Rangpur	07/29/98
Mr. Mahabubur Rahman	President	Samadan Project (a local NGO), Rangpur	07/29/98
Ms. Nurun Nahar Islam	Member	Samadan Project (a local NGO), Rangpur	07/29/98
Mr. Akbar Hossain	President	Poultry Association, Pourashava, Rangpur	07/29/98
Mr. Emrul Ahsan	Dairy Farm Owner	Pourashava, Ranpur	07/29/98
Mr. Abdul Awal	Beef Fattening Farm Owner	Gunjar, Pirgacha	07/29/98
Mr. Md. Akbar Ali	USG Machine Owner	Vill.: Pachpir, Union: Durgapur, Thana: Olipur, Dist.: Kurigram	07/29/98
Mr. Azizur Rahman	Agrimachinery Factory Owner	BDR Road, Lalmonirhat	07/29/98
Mr. Mithu	TPS Start-up entrepreneur	Private Entrepreneur, Rangpur	07/29/98
Mr. Abdullah-hel-kafi	Secretary	Birganj Kallayan Foundation (BKF), a local NGO, Dinajpur	07/30/98
Mr. Nakim Uddin	Seed Company Owner	North Bengal Seed, Rangpur	07/30/98
Ms. Jorka Begum	Pineapple Grower	Vill.: Goushata, Union: Darampur, Thana: Beroi, Dist.: Dinajpur	07/30/98
Mr. Manik Chandra Das	Workshop Owner	Monika Engineering	07/31/98

ATDP Field Office, Jessore

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Mr. Kshirod Mohon Majumder	Zonal In-Charge	ATDP Pilot Zone, Jessore	08/04/98
Mr. Nurul Quasem	Agronomist	ATDP Pilot Zone, Jessore	08/08/98
Mr. Shafiul Islam	APO, Agro-Processing/ Fish-processing	ATDP Pilot Zone, Jessore	08/04/98
Mr. Alhaz Sheikh Mesbah	Fish Hatchery Owner	Rupali Fish Hatchery, Jessore	08/05/98
Mr. Saifuzzaman	Fish Farm Owner/Partner	Shobra Fish Culture Project, Jessore	08/05/98
Mr. Firoz Khan	Fish Farm Owner/Partner	Shobra Fish Culture Project, Jessore	08/05/98
Ms. Shireen Rahman	Poultry Farm Owner	Private Poultry, Jessore	08/05/98
Mr. Kazi Barno	USG Machine Owner	M/s. Brother Agro-Chemicals, Jessore	08/05/98
Mr. Nur Sadat Surja	Farmer/Pineapple Grower	Rupdia, Jessore Sadar, Jessore	08/05/98
Mr. Md. Khairul Kabir	Farmer/Summer Tomato Grower	Mamrakhola, Jessore sadar, Jessore	08/05/98
Mr. Md. Rafiq	Farmer/Summer Tomato Grower	Mamrakhola, Jessore sadar, Jessore	08/05/98
Mr. Md. Mokaddem Khan	Farmer/Summer Tomato Grower	Bolorampur, Bagharpara, Jessore	08/05/98
Mr. Pijush Kanti Baral	APO, Livestock	ATDP Pilot Zone, Jessore	08/05/98
Ms. Khalida Yasmin	Secretary-cum-women Liaison Officer	ATDP Pilot Zone, Jessore	08/06/98
Mr. Sheikh Rowshan Ali	Advisor	Prattai, a local NGO, Jessore	08/05/98
Mr. Abdul Jalil	Finance Officer	Prattai, a local NGO, Jessore	08/05/98
Mr. S. A. Wahed	Chairman	Prattai, a local NGO, Jessore	08/05/98

Official(s) Visited	Designation	Organization(s)	Date of Consultation
		Jessore	
Mr. Md. Awal Khan	Poultry Farm Owner	Jupitar Poultry Farm, Nowapara, Jessore	08/05/98
Mr. Ataur Rahman Bablu	USG Machine Owner	M/s Bosundhara Traders Nowapara, Jessore	08/05/98
Mr. Md. Anwar Hossain	Poultry Hatchery Owner	Dishari Poultry Hatchery, Alamnagar, Jessore	08/06/98
Mr. Shaymol Benarji	Technician	Dishari Poultry Hatchery, Alamnagar, Jessore	08/06/98
Mr. S.M. Mafijur Rahman	Dairy Farm Owner	M/s Saleha Dairy, Poraton Kosba, Jessore	08/06/98
Ms. Rita Rani Mondal	Dairy Farm Owner/Micro Enterprise	Nilganj, Tatipara, Jessore	08/06/98
Dr. Bidhan Das	Thana Livestock Officer	Department of Livestock Services, Jessore sadar, Jessore	08/06/98
Mr. Md. Rafiqul Islam	Farmer (Beef Fattening)	Vill. Madanpur, Sreepur, Magura	08/06/98
Mr. Md. Monzur Mollik	Farmer (Beef Fattening)	Parla, Magura sadar, Magura	08/06/98
Mr. Golam Mustafa	Managing Director	Rajoniganda Cold Storage, Jikargacha, Jessore	08/07/98
Mr. Md. Alamgir	Director	Rajoniganda Cold Storage, Jikargacha, Jessore	08/07/98
Ms. D. Mukti	Poultry Farm Owner	M/s Mukti Poultry Farm, Mirpara, Jessore	08/07/98
Mr. Md. Afsar Uddin Gazi	Fish Farmer	Vill. Alka, Damodar, Phultala, Jessore	08/07/98

ATDP Field Office, Chittagong

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Mr. Md. Shamsuzzaman	Deputy Specialist, Agriculture	ATDP Pilot Zone, Chittagong	08/17/98
Mr. Hasan Newas Mohd. Mamoon	Sub-office Coordinator	ATDP Pilot Zone, Chittagong	08/17/98
Mr. Md. Mostakim	Assistant Program Officer (APO), Fish and Shrimp Technology	ATDP Pilot Zone, Chittagong	08/17/98
Ms. Munirah Bashir	Women Entrepreneurship Liaison Officer	ATDP Pilot Zone, Chittagong	08/17/98
Mr. Sayeed Ahmed Wadud	APO, Agroprocessing	ATDP Pilot Zone, Chittagong	08/17/98
Dr. Rafique Ahmed	APO, Livestock	ATDP Pilot Zone, Chittagong	08/17/98
Mr. Abu Naser	Potential Agroprocessing Entrepreneur	Potential Private enterprise, Chittagong	08/18/98
Mr. Md. Sadeque	Fertilizer Entrepreneur	M/S Chattol Agro Chemical, Chittagong	08/18/98
Mr. Shahadat Hossain	Seed Entrepreneur	The Society Nursery, Chittagong	08/18/98
Mr. Amer Fakhri	Dairy Entrepreneur	M/S Fakhri Agricultural & Dairy Product, Chittagong	08/18/98
Mr. Rafiq	Fisheries Entrepreneur	Chattagram Fisheries	08/18/98
Mr. Iqbal Dada	Managing Director	M.M. Agha Limited, Chittagong	08/18/98
Mr. M. Nurul Islam	General Manager	M.M. Agha Limited, Chittagong	08/18/98

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Mr. Asgar Majumder	Farm Manager	Jerin Poultry Hatchery, Hathazari, Chittagong	08/19/98
Mr. Haroon-ur-Rashid	Potential Livestock or Fisheries Entrepreneur	Vill. Shikolbaha, Thana: Patia, Dist. Chittagong	08/18/98
Mr. Syed Shaheb	Potential Livestock or Fisheries Entrepreneur	Vill. Shikolbaha, Thana: Patya, Dist. Chittagong	08/18/98
Mr. S.A. Mannan	Potential Livestock or Fisheries Entrepreneur	Vill. Shikolbaha, Thana: Patya, Dist. Chittagong	08/18/98
Mr. Haroon	Potential Livestock or Fisheries Entrepreneur	Vill. Shikolbaha, Thana: Patya, Dist. Chittagong	08/18/98
Ms. Syeda Humaira Begum	Potential Agroprocessor	Potential private Enterprise, Chittagong	08/19/98
Ms. Arifa Begum	Poultry and Dairy Entrepreneur	Private Enterprise, Chittagong	08/19/98
Dr. Motaleb Khan, DVM	Private Veterinary Doctor	Blue Crescent Animal & Poultry Treatment Center, Chittagong	08/19/98
Mr. Kafil Uddin Ahmed	Acting Chairman	Bangladesh Fertilizer Association, Dhaka	08/19/98
Mr. Dula Miah	Private Nursery Entrepreneur	Horticulture Enterprise, Rawshanhat, Chandanaish, Chittagong	08/20/98
Mr. Jalal Uddin Faruq	Potential Brood Fish Farmer	Fisheries Enterprise, Barokhain, Anwara, Chittagong	08/20/98

ATDP Field Office, Sherpur

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Dr. Moazzam Hossain	Short Term Consultant, Fisheries	ATDP, Mymensingh Area	07/09/98
Mr. Pabitra Kumar Das	Sub-office Coordinator	ATDP Sub-Office, Sherpur	09/03/98
Dr. M.G. Hossain	Chief Scientific Officer	Fisheries Research Institute, Mymensingh	07/09/98
Mr. Taoyeb Ali	Fish Hatchery Owner	Bhai Bhai Matsay Khamar, Raghobpur, Mymensingh	07/09/98
Mr. Siddiqur Rahman	Fish Hatchery Owner	Jamuna Hatchery, Gouripur, Mymensingh	07/09/98
Mr. Alamgir Azad	Deputy General Manager	Chief Regional Office, BKB, Mymensingh	07/09/98
Participants in Fish Culture Training organized	Trainees under PABA grant	Organized by ATDP/IFDC at FRI, Mymensingh	07/09/98
Mr. Narayan Paul	Proprietor	The G. Paul & Company, Mymensingh	09/03/98
Mr. Rafiqul Islam	Poultry Farm Owner	Maona, Mymensingh	07/09/98
Mr. Aftab Ahmed	Poultry Farmer	Private Poultry Enterprise, Jamirdia, Bhaluka	09/03/98
Mr. Saiful Islam	Poultry Farmer	Private Poultry Enterprise, Jamirdia, Bhaluka	09/03/98
Mr. Md. Abul Hasem	USG Manufacturer	M/s Lucky Enterprise, Sherpur	09/04/98
Mr. Monsur Ali	Dairy-cum-Poultry	M/s Monsur Dairy	09/04/98

Official(s) Visited	Designation	Organization(s)	Date of Consultation
	Farm Owner	Farm, Nakla, Sherpur	
Mr. Sarwar Jahan Azad	Seed Dealer	M/s Subornakhali Enterprise, Nakla, Sherpur	09/04/98
Mr. Mozibur Rahman	Farmer/High breed Maize Grower (Check)	Dhukuria, Nakla, Sherpur	09/05/98
Mr. Hasmot Ali	Farmer/High breed Maize Grower (Check)	Dhukuria, Nakla, Sherpur	09/05/98
Mr. Md. Ilis Hossain	Seed Dealer	M/s Sherpur Bij Bhandar, Khoarerpas, Sherpur	09/05/98
Mr. Habibur Rahman	Poultry Farm Owner	Double H Poultry Farm, Soygori Para, Sherpur	09/05/98
Ms. Rehana Idris	Dairy Farm Owner	M/s Jehan Dairy Farm, Losmonpur, Sherpur	09/05/98
Mr. A.H.M. Abdul Wadud	Fisheries Farm Owner	Panna Bohumukhi Krishi Chamber, Balughata, Nalitabari, Sherpur	09/05/98
Ms. Gulnazar Begum	Beef Fattening Farmer	Sherpur	09/04/98
Mr. Nurun Nabi	Branch Manager	Grameen Bank, Sherpur	09/04/98
Mr. Aminul Islam	Program Organizer	BRAC Area Office, Sherpur	09/04/98
Ms. Modhu Bala	Vegetables Grower	Rangtia, Sherpur	09/04/98
Ms. Hazera	Vegetables Grower	Rangtia, Zinoigadhi, Sherpur	09/04/98
Ms. Piara Begum	Vegetables Grower	Rangtia, Zinoigadhi, Sherpur	09/04/98

ATDP Field Office, Rajshahi

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Mr. Utpal K. Saha	Sub Office Coordinator	ATDP Sub Office, Rajshahi	09/25/98
Mr. Andrew Palma	APO, Agroprocessing	ATDP Sub Office, Rajshahi	09/25/98
Mr. Lutfar Rahman Mollah	APO, Horticulture	ATDP Sub Office, Rajshahi	09/25/98
Mr. Md. Abdul Bari	Deputy Director	DAE, Rajshahi	09/28/98
Mr. M. Ziaul Haq	General Manager	RAKUB, Rajshahi	09/27/98
Mr. Sultan Ahmed	Executive Director	Barind Multipurpose Development Authority	09/28/98
Mr. Ahsanul Karim	Ex-Executive Director	Barind Multipurpose Development Authority	09/28/98
Mr. S.M. Abdul Mannan	Monitoring Officer	Barind Multipurpose Development Authority	09/28/98
Ms. Saira Begum	Regional Manager	BRAC Regional Office, Rajshahi	09/26/98
Dr. M. Monzur Hossain	Advisory Pannel Member	Rantic Ltd., Rajshahi	09/26/98
Dr. A.K.M. Rafiqul Islam	Advisory Pannel Member	Rantic Ltd., Rajshahi	09/26/98
Mr. Asoke Sen Gupta	Agroprocessing Firm Owner	Solar Products, Rajshahi	09/26/98
Mr. Shamsul Alam	Mango Farmer	Vill. Chowbaria, Union: Naohata, Thana: Paba, Dist. Rajshahi	09/26/98
Mr. Anisur Rahman	Hybreed Rice Producer (Check)	Vill. Chowbaria, Union: Noahata, Thana: Paba, Dist. Rajshahi	09/26/98

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Mr. Anfar Ali	Farmer/USG User	Vill. Chowbaria, Union: Noahata, Thana: Paba, Dist. Rajshahi	09/26/98
Mr. Md. Nazmul Swaor	Chairman	Century Mango Products Bangladesh Ltd., Rajshahi	09/26/98
Mr. Md. Bablur Rashid	Managing Director	Century Mango Products Bangladesh Ltd., Rajshahi	09/26/98
Mr. Md. Mostak Ahamed	Director	Century Mango Products Bangladesh Ltd., Rajshahi	09/26/98
Mr. Md. Mahamudun Nabi	Director	Century Mango Products Bangladesh Ltd., Rajshahi	09/26/98
Mr. Muntasir Rahman	Poultry Farm Owner	Vill. Chotobanagram, Thana: Boalia, Dist. Rajshahi	09/26/98
Mr. Tofazzal Hossain	Papaya Grower	Vill. Tokpur, Union: Paba, Dist. Rajshahi	09/26/98
Mr. Mrinal Tribedi Raja	Poultry Farm Owner	Vill. Arani, Thana: Bagha, Dist. Rajshahi	09/26/98
Mr. Abdul Awal Huq	Poultry Farm Owner	Taki Poultry Farm, Horogram, Rajshahi	09/26/98
Mr. Utpal K. Saha	Sub Office Coordinator	ATDP Sub Office, Rajshahi	09/25/98
Mr. Andrew Palma	APO, Agroprocessing	ATDP Sub Office, Rajshahi	09/25/98
Mr. Lutfar Rahman Mollah	APO, Horticulture	ATDP Sub Office, Rajshahi	09/25/98
Mr. Md. Abdul Bari	Deputy Director	DAE, Rajshahi	09/28/98
Mr. M. Ziaul Haq	General Manager	RAKUB, Rajshahi	09/27/98
Mr. Sultan Ahmed	Executive Director	Barind Multipurpose Development	09/28/98

Official(s) Visited	Designation	Organization(s)	Date of Consultation
		Authority	
Mr. Ahsanul Karim	Ex-Executive Director	Barind Multipurpose Development Authority	09/28/98
Mr. S.M. Abdul Mannan	Monitoring Officer	Barind Multipurpose Development Authority	09/28/98
Ms. Saira Begum	Regional Manager	BRAC Regional Office, Rajshahi	09/26/98
Dr. M. Monzur Hossain	Advisory Pannel Member	Rantic Ltd., Rajshahi	09/26/98
Dr. A.K.M. Rafiqul Islam	Advisory Pannel Member	Rantic Ltd., Rajshahi	09/26/98
Mr. Asoke Sen Gupta	Agroprocessing Firm Owner	Solar Products, Rajshahi	09/26/98
Mr. Shamsul Alam	Mango Farmer	Vill. Chowbaria, Union: Naohata, Thana: Paba, Dist. Rajshahi	09/26/98
Mr. Anisur Rahman	Hybreed Rice Producer (Check)	Vill. Chowbaria, Union: Noahata, Thana: Paba, Dist. Rajshahi	09/26/98
Mr. Anfar Ali	Farmer/USG User	Vill. Chowbaria, Union: Noahata, Thana: Paba, Dist. Rajshahi	09/26/98
Mr. Md. Nazmul Swaor	Chairman	Century Mango Products Bangladesh Ltd., Rajshahi	09/26/98
Mr. Md. Bablur Rashid	Managing Director	Century Mango Products Bangladesh Ltd., Rajshahi	09/26/98
Mr. Md. Mostak Ahamed	Director	Century Mango Products Bangladesh Ltd., Rajshahi	09/26/98

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Mr. Md. Mahamudun Nabi	Director	Century Mango Products Bangladesh Ltd., Rajshahi	09/26/98
Mr. Muntasir Rahman	Poultry Farm Owner	Vill. Chotobanagram, Thana: Boalia, Dist. Rajshahi	09/26/98
Mr. Tofazzal Hossain	Papaya Grower	Vill. Tokpur, Union: Paba, Dist. Rajshahi	09/26/98
Mr. Mrinal Tribedi Raja	Poultry Farm Owner	Vill. Arani, Thana: Bagha, Dist. Rajshahi	09/26/98
Mr. Abdul Awal Huq	Poultry Farm Owner	Taki Poultry Farm, Horogram, Rajshahi	09/26/98
Mr. Abu Najam Chowdhury	Joint Director	Seed Marketing, Rajshahi Division, BADC	09/28/98
Mr. Abdus Sattar	Deputy Director	Contract Growing Zone, Rajshahi Division, BADC	09/28/98

Agribusiness Companies, Dhaka

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Mr. Michel Devarrewaere	General Manager	East West Seed (Bangladesh) Ltd., Dhaka	09/01/98
Maj. Gen. Amjad Khan Chowdhury (Retd.)	Chief Executive	Agricultural Marketing Co. Ltd., PRAN, Dhaka	09/08/98
Mr. Md. Kamal Mustafa	Sales Manager, (Seeds)	ACI Seeds, Dhaka	09/08/98
Mr. F.H. Ansarey	Executive Director	ACI Ltd., Dhaka	09/08/98
Major Manzoor Ahmed, BP (Retd)	Managing Director	Aqua Resources Ltd., Dhaka	09/10/98
Mr. M. Wahidun Nabi	Marketing Services Manager	ACI LimitSed, Dhaka	09/08/98

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Mr. Hemayet Uddin Ahmed	Managing Director	HMMS Financial Consultancy & Services Ltd., Dhaka (in connection to NAPL)	09/13/98
Mr. Md. Shahjahan Ali	Director	National Agri Products Ltd. (NAPL), Dhaka	09/13/98 at NAPL 09/15/98 at USAID
Mr. S. Sikander Ahmed	Director (Corporate Affairs)	Agricultural Marketing Co. Ltd., PRAN, Dhaka	09/08/98
Mr. Abdul Hamid Chowdhury	Chairman	C.A. Hamid Group of Companies	09/13/98

Non-Government Organizations, Dhaka

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Mr. Md. Aminul Islam Bhuiyan	Sector Specialist,		
Mr. Mahbubul Islam Khan	General Manager (Enterprise)	BRAC, Rural Development Program, Dhaka	00/00/98
Mr. Aminul Alam	Deputy Executive Director	BRAC Head Office, Dhaka	09/01/98

GoB Officials, Dhaka

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Mr. Md. Habibul Haq	Additional Director, Implementation	Department of Agricultural Extension, Dhaka	09/07/98

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Mr. Md. Enamul Haq (Check)	Director General	Department of Agricultural Extension, Dhaka	09/07/98
Mr. Md. Abdul Halim	Additional Secretary	Ministry of Agriculture, Govt. of Bangladesh	00/00/98

Other Projects, Dhaka

Official(s) Visited	Designation	Organization(s)	Date of Consultation
Dr. Semunegus Hailemariam	Consultant	Hortex Foundation, Dhaka	00/00/98
Mr. Md. Akmal Hossain	Marketing, Finance & Transportation Specialist	Hortex Foundation, Dhaka	00/00/98
Mr. Maarten den Hertog	Project Coordinator	Seed Industry Promotion Unit, Crop Diversification Program, Dhaka	00/00/98
Mr. Rafique Ahmed	Project Coordinating Director	Agricultural Diversification & Intensification Project, Dhaka	00/00/98

TENTATIVE LIST OF ATDP SUPPORT FOR ZONAL ENTERPRISES

Proposed Pilot Zones Enterprises	Sirajgonj	Naogaon	Magura	Bagerhat	Kapasia	Hobigonj	Naikanchari	Rangpur	Birgonj	Modhupur	Shibpur	Chittagong	Swarupkati	Chapai Nowabgonj	Total
Seeds															
Contract Grower Zone															
1. Seed Potato								✓	✓	✓	✓				4
2. Vegetable	✓	✓	✓					✓	✓	✓	✓				7
3. Gene Bank (Horticulture)					✓					✓				✓	3
Fertilizer															
4. Urea Super Granule	✓	✓		✓	✓	✓		✓	✓	✓	✓				9
5. Blended Fertilizer	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	12
6. Soil Analytical Lab					✓							✓			2
7. Bio-Fertilizer			✓						✓						2
Agrimachinery															
8. Farm service business		✓	✓		✓	✓		✓	✓	✓	✓	✓		✓	10
Horticulture															
9. Mushroom					✓						✓	✓			3
10. Floriculture					✓							✓			2
11. Garden Management		✓			✓			✓	✓	✓		✓	✓	✓	8
Contract Grower															
12. Vegetable		✓	✓		✓					✓	✓	✓			6
13. Fruit		✓	✓		✓		✓	✓		✓	✓	✓	✓	✓	10
Livestock															
14. Beef Fattening					✓	✓						✓			3

Proposed Pilot Zones Enterprises	Sirajgonj	Naogaon	Magura	Bagerhat	Kapasia	Hobigonj	Naikanchari	Rangpur	Birgonj	Modhupur	Shibpur	Chittagong	Swarupkati	Chapai Nowabgonj	Total
15. Non-traditional Feed	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14
16. Dairy development through embryo transfer								✓				✓			2
Poultry															
17. Commercial Poultry Farm		✓		✓	✓			✓				✓			5
Agriprocessing															
18. Fruit Processing					✓					✓			✓	✓	4
19. Milk processing								✓				✓			2
20. Poultry processing												✓			1
21. Feed mill					✓			✓				✓			3
22. Maize Processing	✓	✓						✓	✓						4
Contract Grower Zone															
23. Maize			✓		✓			✓	✓			✓			5
24. Soybean					✓	✓									2
															121

SUMMARY LIST OF TECHNOLOGICAL OPTIONS WITH TYPES AND SCALE OF BUSINESS OPERATION

Technologies	Scale of Operation	Level of Business
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Package of Seed Technologies

Production

1. Certified Seed	L, S	N, PZ
2. Foundation Seed	L	N
3. True Potato Seed	L, S	N
4. Tissue Culture	L, S	N, PZ

Variety Development

5. Hybrid Seed	L	N
6. Gene Bank	L	N
7. Genetic Engineering	L	N
8. Transgenic Plant	L	N

Fertilizers and Chemicals

1. Urea Super Granule	S	PZ
2. Blended Fertilizers	S	PZ
3. Micro-nutrients	L	N
4. Bio-fertilizer	L	N
5. Pock Phosphate	L	N
6. Neem Pesticides	S	N
7. Liquid Urea	S	N
8. Foliar Application Plant Nutrients	S, GR	PZ

Agri-Machineries

1. Power Tillers	S, WG	PZ
2. Irrigation Equipments	M, S, WG	PZ
3. Solar and power Dryers	S, WG	PZ
4. Weeders	S, WG	PZ
5. Cleaners and Graders	S, WG	PZ
6. Sprayers	S, WG	PZ
7. Threshers	S, WG	PZ
8. Crushers	S, WG	PZ
9. Shellers	S, WG	PZ
10. Rice Haulers	L, S, WG	N, PZ
11. Specialized Transports	L	N

12. Fertilizer Blenders	M, S	N, PZ
13. Weeders	S, WG	PZ
14. Oil Expellers	L, S	N, PZ

Horticulture

1. Propagation of HYV Fruits	GR	PZ
2. Hormone Treatment	GR	PZ
3. Growth Regulators	GR	PZ
4. Mushroom Culture	S	PZ
5. Floriculture/Cut-flowers	S	PZ
6. Nursery (Fruit Crops/Agro-forestry)	S	PZ

Livestock

1. Balanced Feeding	M, S	N, PZ
2. Animal Fattening	M, S	PZ
3. Non-traditional Feed UMS, UMB, etc.	S, M	PZ
4. Goat/Sheep Rearing	S, M	PZ
5. Artificial Insemination	S	PZ
6. Improved Sanitation	L, S	N, PZ
7. Regular Vaccination	S	KZ
8. Selective Breeding	L, M, S	N, PZ
9. Proper Treatment	L, M, S	N, PZ
10. Exotic Breed	L, M, S	N, P
11. Embryo Transfer	L, M, S	N, PZ

Poultry

1. Rearing Exotic Breed (Br.)	L, M, S	N, PZ
2. Rearing Exotic Breed (Lay.)	L, M, S	N, PZ
3. Confinement and Stall Feeding	L, M, S	N, PZ
4. Balanced Feeding	L, M, S	N, PZ
5. Improved Parent Stock	L, M, S	N
6. Improved Hatchery	L, M	N
7. Improved Sanitation	L, S	N, PZ
8. Regular Vaccination	L, M, S	N, KZ
9. Proper Treatment	L, M, S	N, PZ

Agroprocessing

Processing

1. Juice	L, M, S	N, PZ
2. Paste	L, M, S	N, PZ
3. Slice	L, M, S	N, PZ

4. Jam	L, M, S	N, PZ
5. Jelly	L, M, S	N, PZ
6. Squash	L, M, S	N, PZ
7. Puri	L, M, S	N, PZ
8. Sauce	L, M, S	N, PZ
9. Catchup	L, M, S	N, PZ
10. Pulp	L, M, S	N, PZ
11. Pickles	L, M, S	N, PZ
12. Marmalade	L, M, S	N, PZ
13. Morabba	L, M, S	N, PZ
14. Powder & Dust	L, M, S	N, PZ

Packaging

1. Canning	L, M, S	N, PZ
2. Bottling	L, M, S	N, PZ
3. Aluminum Foiling	L, M, S	N, PZ
4. Paper Packeting	L, M, S	N, PZ
5. Wooden Bucketing	L, M, S	N, PZ
6. Bamboo Bucketing	L, M, S	N, PZ
7. Jute Sacking	L, M, S	N, PZ

Note: L = Large, M = Medium, S = Small, WG = Working Group, N = National, PZ = Pilot zone

Source: Report on Technology Needs Assessment, ATDP/IFDC. December 1995, pp viii-ix.

Annex XIII

TECHNOLOGIES IDENTIFIED BY ATDP THROUGH 27 OCTOBER 1998

Sector	National Program	Pilot Zone	Experimental	Company Specific Activity
Seed & Field	Certified Seed (all crops)	Foundation Seed (all crops)	True Potato Seed	Tissue Culture; Rantec
			Hybrid Seed	
Fertilizers and Chemicals	Urea Super Granule		Micro-nutrients	
	Blended Fertilizers		Bio-fertilizer	
			Neem Pesticide	
Agro-Machinaries	Power tillers	Sprayers	Irrigation equipment's	
	Threshers	Shellers (corn), power	Solar and Power Dryers	
	USG Briquetter machine	Straw chopper	Fertilizer Blenders	
		Hydro tiller	Reaper (power tiller mounted)	
			Paddy transplanter	
			Dual mode thresher	
			Seed drill (soybean)	
Horticulture		Propagation of HYV Fruits	Growth Regulators	Floriculture/Cut-flowers; Manzoor Chowdhury/Dr Ferdosi
		Hormone Treatment		Baby corn
		Nursery (Fruit Crops/Agro-forestry)		Modified container for horticulture export
		Summer tomato		

Sector	National Program	Pilot Zone	Experimental	Company Specific Activity
Livestock	Balanced Feeding	Fodder production		Artificial Insemination; BRAC
	Non-traditional Feed UMS, UMB, etc.	Regular Vaccination		
	Goat Rearing	Proper Treatment		
	Improved Sanitation	Sheep rearing		
	Selective Breeding			
	Beef Fattening			
	Biosecurity			
Poultry	Rearing Exotic Breed (Br.)	Rearing day old chick		
	Rearing Exotic Breed (Lay.)	Regular Vaccination		
	Confinement & Stall Feeding	Proper Treatment		
	Balanced Feeding			
	Improved Parent Stock			
	Improved Hatchery			
	Improved Sanitation			
	Biosecurity			
Agroprocessing	Juice	Jam	Pulp	
	Paste	Jelly	Powder & Dust	
	Slice	Squash	Recycling of animal waste	
	Pasteurization	Puri	French fries	
		Sauce		
		Ketchup		
		Pickles		

Sector	National Program	Pilot Zone	Experimental	Company Specific Activity
		Marmalade		
		Morabba		
		Dehydration; PRAN		
		Baking		
		Chips		
Packaging	Aluminum Foiling	Canning		Bottling; PRAN
	Paper Packeting	Wooden Bucketing		
Fishery		Hatchery		
		Fish-cum-duck		
		Rearing exotic breeds		
		Policulture		
		Balanced feeding		

Source: ATDP/IFDC

ADDITIONAL RECOMMENDATIONS ON GRANTS

STAMP

- STAMP grants should be directly related to improving farmers production where this output is slated for processing (e.g. BRAC's milk processing plant) and/or marketing.
- Grants that provide funds for international travel/training should be contingent on the traveler obtaining the required visa. STAMP could provide a letter to the visa section stating that should the requester receive a visa, he/she will be given a grant for the purpose stated.
- The listing of micro grants does not clearly distinguish between those made to Associations, v. NGOs v. private enterprises. For project Monitoring & Evaluation, this would be useful, and it would be easy to do using a column with designations of A, N, and P.
- In many cases, the column showing approval status does not show the date a grant was approved and/or the date the grant agreement was executed. It would be useful to include this information.
- The "remarks" column would be more useful if it reported status of grants v. a chronology of actions taken by ATDP in it efforts to provide grants. If this column is useful for ATDP monitoring purposes, a separate column should provide the status information.

MATT

- ATDP's reporting staff (MIS group) should be made aware of the difference between the uses of the ACF Development Fund as segregated into MATT training for private sector participants, NGOs and Associations versus Government external training under the ACFDF.
- ATDP's MATT reporting should be improved through:
 - a) Inclusion of a "Results" column; and
 - b) Revision of the returned participant questionnaire to solicit more explicit information. The questionnaire should not provide the participant with ready made answers requiring no thought process and self-expression.
- ATDP's results reporting should provide examples of benefits that the participants derived from the international training.
- As many of the measurable benefits from the MATT and similar programs do not materialize overnight, ATDP should attempt an annual follow-up with participants to document any meaningful activities such as increased investments, increased sales, lower production costs, improved products, and the hiring of additional personnel, expanded business opportunities abroad, etc.

- There should be a limit on the number of and/or dollar amount of grants any one entity is entitled to; Generally, one entity can obtain three PABA grants and then obtain three STAMP grants or three MATT grants.
- USAID should review and evaluate a number of those training's which appear to be excessive in cost to determine if their costs were justified, legitimate and fiscally responsible.
- USAID should take a more active role in reviewing and appearing external training programs as to both content, duration and reasonableness of costs.