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PRICE
POVERTY REDUCTION BY INCREASING
THE COMPETITIVENESS OF ENTERPRISES

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BANGLADESH

ANNUAL REPORT FOR FISCAL YEAR 2012



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POVERTY REDUCTION BY INCREASING THE COMPETITIVENESS OF ENTERPRISES (PRICE)

ANNUAL REPORT FOR FISCAL YEAR 2012

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The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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LIST OF ACRONYMS

BADC	Bangladesh Agricultural Development Corporation	ILO	International Labour Organization
BBMS	Bamunji Beel Motsojibi Samity	JSK	Janaseba Kendra
BCOA	Bangladesh Cage Culture Owner's Association	KMFMCSL	Kansat Mango Farmers Cooperative Society Limited
BDT	Bangladeshi taka (currency)	LFA	Leather Footwear Association
BFFEA	Bangladesh Frozen Food Exporter Association	LFMEAB	Leather Goods & Footwear Manufacturers & Exporters Association
BSIL	Bengal Shoe Industries Ltd.	LSBPC	Leather Sector Business Promotion Council
BMET	Bureau of Manpower, Employment and Training	LTSE	Leather Technologist Small Entrepreneurs
CII	Confederation of Indian Industry	MoFL	Ministry of Fisheries & Livestock
COC	Codes of Conduct	MSME	Micro, Small, and Medium Enterprise
COEL	Center of Excellence for Leather	MTT	Modified Traditional Technology
CST	Closed System Pond Technology	NFMC	Naziretek Fish-Dryer's Multipurpose Cooperative
DAE	Department of Agriculture Extension	NGO	Non-governmental Organization
DITF	Dhaka International Trade Fair	NMS	Nokla Motsojibi Samity
DOF	Department of Fisheries	NSDC	National Skills Development Council
DMBBS	Digherkanda Motsyapona, Beboshahi- Kallan Bohumukhi Somabaya-Samity	OJT	On the Job Training
EBL	Eastern Bank Limited	PBKS	Palli Bandhu Kallan Sangstha
EFADF	Environment Friendly Agricultural Development Foundation	PCR	Polymerase Chain Reaction
EU	European Union	PL	Post-larvae
FBCCI	Federation of Bangladesh Chambers of Commerce and Industry	RDA	Rural Development Academy
FDDI	Footwear Design and Development Institute	RRF	Rural Reconstruction Foundation
FFS	Farmer Field School	SCA	Seed Certification Agency
FTF	Feed the Future	SIF	Semi-Intensive Farming
FTL	Fishtech Ltd.	SOP	Standard Operating Procedures
FY	Financial Year	SPGA	Seed Potato Growers Association
GAP	Good Aquaculture Practice	SSOP	Sanitary Standard Operating Procedures
GFL	Gazi Fish Ltd.	SSS	Society for Social Services
GFFM	Good fish farm management	SME	Small and Medium Enterprise
GHERS	Greater Harvest and Economic Return from Shrimp project	SMSC	S&M Shrimp Culture Ltd
GIP	Goods in Process	TBMP	Traditional Best Management Practices
GKSSE	Grameen Krishok Shahyak Sangstha Enterprise	TMUS	Trinomul Manobik Unnyan Sangstha
GUKED	Gram Unnayan Kendra Enterprise Development	TOT	Training of Trainers
HACCAP	Hazard Analysis and Critical Control Points of Bangladesh	TRD	Technology for Rural Development
		USAID	United States Agency for International Development
		USD	United States Dollar
		WI	Winrock International
		WFC	World Fish Center

EXECUTIVE SUMMARY

The USAID funded Poverty Reduction by Increasing the Competitiveness of Enterprises (PRICE) project works with the Government of Bangladesh and with private sector enterprises and organizations to lessen and where possible remove constraints in the horticulture, aquaculture and leather products value chains. By increasing the competitiveness of the value chains, PRICE is able to help create new income generating opportunities for targeted low income groups.

During FY2012, ending September 30, 2012, PRICE's activities were expanded in the southwest region of the country to align with USAID's Feed the Future initiative. Overall, the project has made significant progress towards achieving its goals including sales growth, job creation, and increased investment.

Horticulture: In the horticulture sector PRICE has expanded its activities in the southwest region. To meet the growing demand of the market, PRICE assisted its horticulture partner organizations to increase their production and improve the quality of their products through trainings, farmer field schools, and increasing farmer access to markets and finance. During FY2012 PRICE trained and assisted approximately 30,000 farmers to enhance their capacity for better production and increase the supply of potato, eggplant, and mango for domestic markets and potential export markets. PRICE also assisted in developing potato plantlets from meristems and helped laboratories produce disease free potato seeds.

In FY2012 PRICE helped organize contract farming systems, which provided support to the contract farmers for better potato production by utilizing improved technology through different training initiatives. The training and support made significant positive changes in both the quality and quantity of farmer outputs.

PRICE worked with seven partner organizations to train 3,700 eggplant farmers to increase their production and help them receive a higher market price. The project assisted approximately 2,400 mango farmers through four associations to improve their production by training them in orchard management, pest control, harvesting and post-harvest technology. As a result of all of PRICE's horticulture interventions, horticulture sales increased by almost \$36.1 million, 6,588 new jobs were created, and investment was increased by \$239,000.

Aquaculture: Both fisheries and shrimp play major roles in meeting Bangladesh's food requirements. In addition, these products also contribute to export sales and help generate new employment opportunities. However, due to issues like quality control, food safety, and post-harvest handling problems, both fish and shrimp sectors face difficult obstacles to increase production. In FY2012, PRICE, through its 70 partners, assisted 28,123 farmers on improved technology of fish farming and management. Moreover, they learned group marketing techniques and were linked to high quality seed producing hatcheries, nurseries, and feed millers. These market linkages resulted in higher production and better sales. The shrimp subsector received workforce development assistance for better export processing and arranged several awareness creation campaigns to stop malpractice and adulteration in the shrimp sector. As a result of these efforts, PRICE's aquaculture partners increased their sales by \$52.5 million, created 19,001 new full-time jobs (5,737 in fish and 13,346 in shrimp) and invested an additional \$12.2 million in their businesses.

Leather Products: The leather industry earns high foreign revenue for the country and generates a large number of job opportunities. As a lack of skilled workers is one of the major hindrances for the growth of this sector, PRICE continued to support workforce and capacity development. During this year, approximately 3,500 workers received training to develop their knowledge and skills in the leather products sector. To ensure the sustainability of this effort, PRICE collaborated with

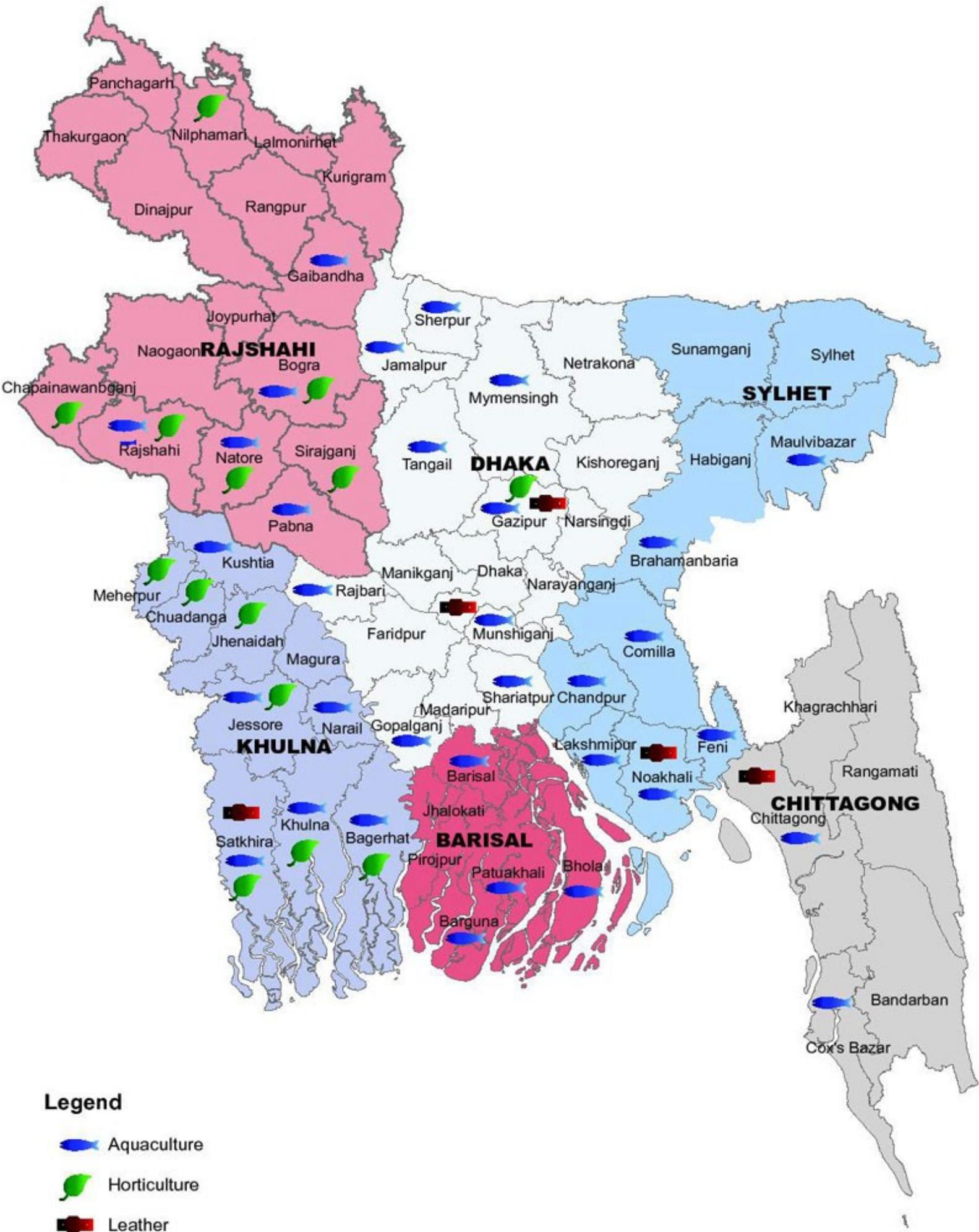
EXECUTIVE SUMMARY

Leather Footwear Association and the International Labor Organization Center of Excellence for Leather to jointly train approximately 1,200 newly skilled workers through its skills development program. Additionally, 50 new supervisors were trained through its supervisor development program.

PRICE also assisted SMEs through its partner organizations and supported their successful participation in the Dhaka International Trade Fair and National SME Fair. This year, in the leather products sector, PRICE helped generate \$36.3 million additional sales and \$180,000 in private investment. This resulted in 2,736 new jobs in the sector.

PRICE is currently expanding its aquaculture and horticulture activities in the southwest of the country with the complete focus to support USAID Feed the Future priorities during its extension period through December 2013.

PRICE WORK AREAS





Section I

Horticulture

OVERVIEW

In FY2012, the overall production of vegetables, including potato, was satisfactory and yield was strong. National potato production was 8.2 million mt, very close to the previous year's production, despite a 6.5 percent lower land coverage. This indicates that farmers were receiving higher per unit yields. Production of other major vegetables, namely eggplant, tomato, gourds, and onions were also good. Although mango production was not as strong as expected, higher prices compensated farmers for their loss in production.

PRICE was instrumental in improving the domestic supply of fruit and vegetables. PRICE's activities addressed the constraints of gaining access to high quality inputs and credit, taught better production and post-production techniques, and established stronger market linkages and better information dissemination. These trainings increased the production of potato, eggplant, vine crops popular in the southern region, and mango. In addition, the project continued to promote safe production practices, the use of compost and bio-fertilizer, and assisted its partners in producing and promoting high quality vegetable seeds. Previously, PRICE's efforts in strengthening horticulture crop value chains covered the southwest and northwest regions of Bangladesh. However, in 2012 PRICE reoriented its focus to the southern region where USAID's Feed the Future (FTF) initiative is currently being implemented.

During this year, PRICE's horticulture sector partners increased their sales by \$36 million. PRICE's partners increased their investment in fixed assets by \$239,000 during this year and as a result, 6,588 full time jobs were created by the partners. Of these jobs, 1,720 were acquired by women.

Achievements in Horticulture during FY2012

<i>Sales increased</i>	\$ 36.1 million
<i>New jobs</i>	6,588
<i>Investment increased</i>	\$ 239,000
<i>Farmers trained in technology</i>	29,336
<i>Farmers trained in management</i>	13,138
<i>Persons trained in workforce development</i>	1,130

A. POTATO



PRICE has been working throughout the entire potato value chain to remove constraints hindering growth. PRICE has focused on improving the quality of seeds in Bangladesh and increasing farmers' access to these seeds. PRICE is supporting tissue culture labs and is working to improve the efficiency of seed entities to produce and market high quality seeds with proper certifications. In addition to supporting the lab based entities, PRICE linked the labs with commercial seed companies to assist them with organizing pre-breeder, breeder, and foundation seed production under the supervision of experts.

PRICE also provided support to its partners in organizing contract farming for certified potato seed production and establishing linkages with the Seed Certification Agency (SCA) and its enterprises. This enabled PRICE's partners to supply foundation seeds, inputs, and credit to their contracted farmers.

As ample opportunity exists to increase the per unit area yield of table potato, which increased from 18 mt per ha last year to 19 mt per ha this year, PRICE and its partners continue to help small potato farmers in the northern and southern regions. PRICE and its partners provide trainings and demonstrations on proper use of high quality certified seeds, appropriate seed cutting and planting techniques, adopting integrated crop management practices, and proper post-harvesting handling techniques.

In the northern region, PRICE worked to expand the processing type of potato and replaced the local low yielding varieties with high yielding dual purpose potatoes. This has resulted in higher profits than traditional varieties.

This year the national wholesale average price of fresh white potato was around approximately \$97.56 per ton, whereas the price of the newly introduced processing varieties was around approximately \$146.34 per mt. Potato production was very good in the PRICE-supported areas, reaching a maximum of 30-32 mt per ha versus the national average of 19 mt per ha. Exporters stated that the higher domestic prices made it difficult to export and the export volume was low.

A. POTATO



Picture: Konika Seed Company Ltd's tissue culture net house in Bogra

A.1.1. Strengthening Capacity of Biotechnology Labs

In recent years a few biotechnology labs have started producing potato plantlets through meristem culture. However, most of these labs lack adequately trained manpower, equipment, chemicals, and proper quarantine systems. As a result, commercial utilization of the technology has remained out of reach. PRICE helped to build capacity of the labs to overcome several challenges of producing disease free plantlets. Among these challenges were transferring the plantlets from the labs to the fields while maintaining proper quarantine measures and ensuring that the healthy plantlets were delivered to the farmers.

PRICE worked closely with the Seed Potato Growers Association (Rajshahi), Ferdous Biotech (Nilphamari), Rural Development Academy (RDA) (Bogra), and Technology for Rural Development (Bogra) by providing technical support to the lab technicians on potato plantlet production. The work focused mainly on multiplying the meristems. As a result, laboratory technicians helped improve the production of potato plantlets and trained new recruits. Through these efforts, the laboratories produced a total of 490,509 potato plantlets during this year.

In addition to selling to several seed enterprises, the Seed Potato Growers Cooperative Association delivered more than 150,000 plantlets to its member farmers. However, due to a low market price for table potato, this year's demand for plantlets was less than the previous year as farmers mainly used their stored seeds instead of seeking replacement.

A.1.2. Assisting Enterprises to Produce Basic Seed

In order to increase the commercial availability of first generation disease free potato seeds with high vigor and genetic purity, PRICE assisted its partner seed entities to produce basic seeds. These partner entities included Technology for Rural Development, RDA, Ferdous Biotech Ltd., Potato Seed Growers Association, Konika Seed Company Ltd., Unique Seed Company, and Sajib Seeds. Companies were supported to produce both pre-breeder and breeder seeds following strict control measures rather than multiplying from certified seeds. This technique reduces the risk of infection from various diseases. The next two cycles of disease free seed production involve the mini and micro-tuber which are placed into protective net houses which prevent insects from entering and thereby prevent diseases.

PRICE's partners were successful in producing 4,400 kg of Diamant, Cardinal, Lady Rosetta, and Asterix variety disease free mini-tubers, 6.99 mt of pre-breeder seed and 114.12 mt of breeder seed.

A. POTATO

Technology for Rural Development produced 303 mt of foundation seed valued at around approximately \$147,805. RDA produced 59 mt of foundation seed during the season valued at around \$71,927 and Konica produced 95 mt of first generation foundation seed. Additionally, Konica organized trainings for 30 contract seed growing farmers on seed production from tissue cultured materials.

A1.3. Capacity Building of Potato Technicians

PRICE continued to strengthen the capacity of local entities engaged in seed potato production by training a large number of specialists and technicians in the country who can serve as the technical force behind the tissue culture based, disease free potato seed industry of Bangladesh. In May 2012, two training courses were held for the management personnel and laboratory technicians of seed potato producing organizations and field supervisors. PRICE supported RDA in Bogra organize a week long residential training course for 20 field supervisors from different tissue culture seed potato companies. The highlights of the course were tissue culture based seed potato production technology, basic agronomic practices, prevention of diseases and pests, pre and post-harvest handling issues, types and classes of potato seeds, quality control and certification, cost of production, and economic returns.

The second ten-day course included 20 management personnel and tissue culture laboratory technicians. During the training course participants received extensive hands-on training of laboratory equipment and glassware, cleaning, sterilization, safety, maintenance and sanitation, preparation of media, meristem culture techniques, problems associated with proper growth, proper use of chemicals, light intensity and duration, growth monitoring, working in the laminar air flow bench, transfer of plantlets, hardening, transfer to main field, and net house structure. The practical sessions of the training were conducted in RDA's tissue culture laboratory.

A.1.4. Supporting Seed Enterprises for Certified Seed Production through Contract Farming

Contract farming of certified potato seed is an important PRICE initiative which addresses the chronic problem of inadequate availability of high quality seeds. With its renewed focus in the south, PRICE provided support to PRIDE Agro Enterprise Ltd. to organize trainings for 60 seed potato contract farmers. The training, "Improved Potato Seed Cultivation Technology through Contract Farming," conducted by potato seed experts, was held in Shomeshpur and Notunhat of Jessore Sadar. PRIDE Agro Enterprise also organized a supply of 16,416 kg of potato seeds for the trainees, of which 3,600 kg were supplied by PRIDE and the rest from BADC and Classic Seed Company. Farmers successfully planted certified Diamant and Cardinal seeds across 27.4 acres of land with good crop conditions. PRICE also assisted PRIDE Agro Enterprise to provide technical support to farmers during tuberization and maturity of potato stages. Support was also provided on haulm pulling, harvesting, curing, sorting, grading, and bagging. PRICE assisted the enterprise to procure 20,000 kg of seeds from the contracted farmers, properly certify them by the SCA, and placed them in cold storage.

Konica Seed Company, another PRICE supported company, extended their potato contract farming area to Kadipur of Damurhuda Upazilla and Baiddanathpur of Jibonnagar upazilla and provided hands-on training to 130 contract farmers to produce Diamant and Cardinal variety potato seed on 46 ha of land. In addition to providing financial support, Konica also supplied 74,160 kg of disease free foundation seeds, fertilizer, and other chemicals to their contract farmers. Together, PRICE and Konica Seed Company provided technical supervision during production and bought back 850 mt of second generation foundation seeds. These seeds were duly certified by the SCA, graded, sorted, packed, and stored. These seeds are expected to be utilized by potato farmers in FTF districts.

A. POTATO

Ferdous Biotech organized contract farms for 25 farmers across four ha in Joldhaka, Nilphamari. Seed and other inputs were provided for certified seed production in the Diamant, Cardinal, and Granola varieties and the contract farmers produced 102 mt seeds of these varieties during the season. These seeds were certified, procured, and stored in cold storages for next year's market. Aside from contract farming, the company also established its own production facility on 1.6 ha producing 41 mt of Diamant and Cardinal seeds.

Shibganj Potato Farmers Cooperative Society, consisting of 2,400 potato farmers, requires a large quantity of good seeds every year, but routinely struggles to obtain them. PRICE supported the association to grow seeds from foundation seeds on 1.4 ha to meet the demand of the association. During January and February a late blight affected the Shibganj area, but with the technical support of PRICE they successfully prevented severe damage. As a result, the association successfully produced about 16 mt of grade A and B certified seeds and stored them in a timely manner. The remaining potato will be used for table purposes.

A.1.5. Support to Establish Demonstration Plots and Field Days for Technology Dissemination

Some of the major constraints in the potato value chain that affect market prices include unstable production and unreliable quality. These constraints also hamper the ability to meet the required specifications of the food and processing industry. To combat this, in the north, twelve demonstration plots were established with an average plot size of .04 ha to showcase crop management and yield performance to the neighborhood farmers.

While establishing the demonstration¹ plots, plot owners and neighborhood farmers were provided technical advice and guidance. The average yield, which was 8 to 10 mt per ha more than the best farmers' yields without interventions. The interventions utilized improved varieties, including Cardinal, Diamant, and Asterix instead of "Granola," which is widely used, but has a very low market price. After the demonstrations farmers are now more confident in regards to production technology and are familiar with sources for better seeds.

Two field days on potato seed production from tissue cultured products were held at the Seed Village and RDA farm where potato farmers from neighboring villages participated.

Representatives from several seed companies including Konica Seed Company, Unique Seed, Ferdous Biotech, and Ankur Seed attended the field days. Seed certification officers of Bogra participated and expressed their satisfaction about the quality of seeds. Farmers visited pre-breeder, breeder, and foundation seed plots to observe the different types of potato seed and the resulting yield. A lively discussion session was held at the end of the field visit about production technology and the price of different types of seeds.

Potato Demonstrations

Major learning interventions at potato demonstrations included: irrigation and optimum soil moisture maintenance; aphid control and proper use of appropriate pesticides in correct doses; control of late blight; earthing up during tuber maturation to avoid greening; haulm pulling; curing in the shade to make help the skin; sorting and grading into proper sizes; and, yield benefits of using first generation seed.

A. POTATO

A.1.6. Establishing Supply Chain of Processing Potato

Potato processing factories, especially potato chip industries, have been facing challenges to run at full capacity. One reason for this is a lack of potatoes with a dry matter content of at least 20 percent. To address this challenge PRICE partnered with Blue Moon International to support contract farming with one of the best available varieties “Courage.” The variety was cultivated by 95 contract farmers in five different locations of Bogra, Rangpur, Jamalpur, and Munshiganj. In the end, Blue Moon International succeeded in supplying 878 mt of high quality processing potatoes to Bombay Agro, a potato chip factory.

A.1.7. Facilitate Introduction of New High Yielding Dual Purpose Potato

Last year PRICE introduced three table and processing potato varieties, Asterix, Lady Rosetta, and Courage, in the districts of Bogra, Sadar, and Niphamari under a contract farming system. Asterix was introduced to 139 farmers of GUK Enterprise Development and Murail Rural Development Multipurpose Cooperative Society Limited. This year, under the technical supervision of PRICE and the involvement of two PRICE partners, Murail Association and GUK Enterprise Development, more than 400 farmers cultivated the variety on more than 405 ha of land. These farmers enjoyed a bumper production with an average yield of 28-30 mt per ha. Farmers sold the potato with a premium price of BDT 12 (\$1=82 BDT) per kg. It is envisioned that the increase in potato production will eventually meet the demand of the French fry industry.

Sajib Seeds planted Lady Rosetta, a high yield, high dry matter content table potato, on nine ha and got 228 mt of finished potatoes with proper size and grade. The enterprise supplied the total quantity of potato to Quashem Food Industry for making potato chips.

A.1.8. Facilitating Productivity of Table Potato through Capacity Building of Farmers

In the south, PRICE assisted several new agro enterprises from the Jessore-Khulna region to organize and support vegetable farmers who are either growing potatoes, or are interested in growing potatoes. Through these new partners, PRICE helped organize small holder farmers for potato farming and conducted field training sessions (including demonstrations) for 4,080 potato contract farmers during the potato season. Among these trainings, two day-long sessions were conducted to demonstrate the following modern cultivation methods of table potato cultivation:

- seed cutting and treatment techniques
- planting methods
- fertilizer doses and fertilizer application methods
- earth raising
- soil moisture management
- pest and disease identification and control
- spraying schedules
- type and doses of pesticides
- clean cultivation methods
- haulm killing
- curing, harvesting, sorting, grading, and packaging

A. POTATO

PRICE partners organized the following trainings:

Enterprise	No. of Participants
Dipti Agro Enterprise	600
PRIDE Agro Enterprise	660
Jagoroni Agro Industries	600
Proshikhito Jubo Kallyan Agro Enterprise	600
Rural Reconstruction Foundation	990
Shushilon	570
Krishok Bandhu Karmashuchi	150
Total	4170

B. EGGPLANT



Eggplant is one of the most important vegetables grown in Bangladesh. It provides a regular cash flow to small farmers for three to five months a year, and consistently has a high market demand as a fresh product.

PRICE supported its partner enterprises to organize contract farming involving and organizing small farmers groups that would be trained on overcoming major production constraints. Specifically, the trainings addressed using balanced doses of fertilizers and irrigation management. During the later part of the winter season, PRICE supported its partner enterprises to organize trainings on harvesting, post-harvest handling, and marketing high quality eggplant at a higher price.

For summer eggplant farmers trainings were provided on production techniques to control pests. Farmers were shown how to utilize both biological and mechanical control measures to improve the quality of the crops, lower the cost of production, reduce damage to the environment, and avoid negative effects on human health. Additionally, several farmer field schools were organized to help farmers solve their production problems independently.

Yields were generally high in most locations and the wholesale price per quintal ranged from approximately \$12.12 in early January 2012 to around \$23.00 in February 2012. From mid March to early April, winter eggplant had its peak harvest. However, from mid April onwards, production started to decline and market prices started to increase. The wholesale price of eggplant was approximately \$15.85 per quintal, which reached \$18.90 in June. However, the farm gate price received by PRICE's beneficiary farmers was much higher, \$21.95-\$26.82, due to the higher quality of eggplant produced by the farmers.

B.1. Increasing the Capacity of Eggplant Farmers

In the south, particularly in Jessore, eggplant is the main crop. But in recent years, eggplant production costs have increased due to the use of higher quantities of chemicals and farmers are faced with a tough decision. If they use chemicals they are unable to make a profit, however, without chemicals, production goes down. In addition, using chemicals can risk the health of farmers and consumers, and is also damaging to the environment.

B. EGGPLANT

In this challenging situation PRICE has been working with several enterprises to address these constraints facing farmers in the southern region of the country. During the current year, PRICE supported training of about 4,030 eggplant farmers to improve their problem solving capacity associated with using high doses of pesticides. The trainings, outlined in the table below, included instructions on the use of organic pesticides, proper fertilizer application, good agricultural practices for pest control, irrigation, and post-harvest handling.

The Polly Prokrity and Society Development committee also facilitated market linkages for their farmers of Magura and Fardpur. Polly Prokrity connected its eggplant farmers in Magura District with wholesalers and buyers at Magura and Shripur market for marketing eggplant and other crops. The SDC established marketing linkages with the aratdar at Nutan and Mojumdar bazars and Hat Krishnopol market to sell eggplant for higher prices.

Enterprise	Number of Participants	Regions
PRIDE Agro Enterprise	1,230	Monirampur <i>Upazilla</i> , Jessore
Polly-Prokrity	150	Sreepur <i>Upazilla</i> ; Magura Sadar <i>Upazilla</i>
Society for Development Committee	510	Sadarpur <i>Upazila</i> , Faridpur
Jagroni Agro Industries	240	Jessore, Kotchandpur, Jhenaidaha
Rural Reconstruction Foundation	910	Jessore
Krishok Bandhu Karmashuchi	300	Jhikorgacha <i>Upazilla</i> , Jessore
Shushilon	150	Kaliganj, Satkhira
Biotech Agro	300	Meherpur Sadar, Gangi
Dipti Agro Enterprise	300	Monirampur <i>Upazilla</i> , Jessore

B.2. Supporting Farmers' Field Schools

A Farmer Field School (FFS) is a learning method which focuses on integrated crop management throughout the full growing season and is established in a specific area where a particular crop is grown. Considering the high cost and daily involvement of farmers for a long lasting traditional Farmer Field School, PRICE has developed a modified approach, which is cost effective and does not require season long involvement. In the modified approach, Farmer Field Schools are conducted repeatedly with the same group of farmers in a specific field at five to six critical periods of crop growth.

The FFSs, outlined below, covered general topics such as seed bed preparation, plant nutrition, application of fertilizers and compost, irrigation, soil health, harvesting techniques and post-harvest handling. As a result of adopting better technology and rational pest management, some PRICE assisted farmers more than doubled their harvest increasing per ha production of eggplant from 12 mt to 30 mt.

Enterprise	Number of FFSs	Number of Participants	Regions
Polly-Prokrity	3	90	Magura Sadar
Proshikhito Jubo Kallyan Agro Enterprise	20	600	Jessore Sadar
Dipti Agro Enterprise	3	75	Jhikorgacha <i>Upazilla</i> , Jessore

C. MANGO



Mango is one of the major cash crops in northern Bangladesh. However, particularly in Rajshahi, and Chapainwabganj districts, the amount of area under mango cultivation is expanding slowly. In the south, Meherpur and Chudanga were renowned for their mango orchards but they are also in a declining phase. This year, with the help of a favorable climate and improved management practices, orchards achieved around 70 percent tree bearing and good fruit growth. In the southwest, only around 50 percent of the plants had flowers and there was poor fruit setting. In the coastal area such as Satkhira, the crop was poor due to heavy fog during February and March 2012, and was further reduced with less fruit due to the fungal disease Anthracnose spp.

This year, the overall mango production in the country was estimated to be 20 percent less than the previous year, which affected mango prices in the market. Himsagar, one of the early varieties, hit the market in May with a price of \$970 per mt and the variety Langra fetched \$853 per mt. The late varieties Fazli and Ashwina had better yields than the early harvests.

PRICE provided training and technical support to mango growers in both areas during the growing season to help them obtain optimum harvest and returns. This included supporting two enterprises in the south and two farmer associations in the north. PRICE trained growers to retain fruit, protect crops from pest and diseases, improve and maintain fruit quality, and to satisfy local markets and compete with imported fruit. As a result, these farmers saw better production compared to other mango farmers.

C. MANGO

C.1. Assisting the Mango Farmers in Building Capacity to Address Market Demand

Important steps towards ensuring a regular harvest include orchard floor management, particularly fertilization followed by plowing irrigation and mulching, putting the plants under short -duration stress to induce flushing, and regular pruning. Most farmers do not have the necessary skill and knowledge to care for the orchards to maximize their crops.

To address these challenges, PRICE and its partners supported training for farmers in both the northern and southern regions on mango orchard floor management, which included sessions on irrigation; pest management; harvesting techniques that improve productivity; quality of mango; adoption of proper harvesting by using harvester; hot and cold water treatment after harvest; and, cleaning, sorting, grading, and packing.

The following partners undertook orchard management and post-harvest handling trainings in the listed regions:

Enterprise	Number of Participants	Regions
Kansat Mango Farmers Multipurpose Coop. Society Ltd.	883	Shibganj <i>Upazila</i> , Nawabganj
Jagoroni Ago Industries	270	Mehepur sadar
Chesta Agro Enterprise	990	Kotchandpur <i>Upazila</i> , Jhenaidaha
Adorsho Foundation Agro Enterprise	750	Damurhuda <i>Upazila</i> , Chuadanga
Rural Reconstruction Foundation	510	Meherpur sadar

C.2. Training for Mango Wholesalers on Post-Harvest Handling

PRICE assisted Kansat Mango Farmers Multipurpose Cooperative Society Ltd. in organizing training for 200 mango wholesalers in Kansat's mango market on proper handling, grading, packaging, and transportation. Kansat's mango market is one of the largest mango wholesale points in Bangladesh.

Through the training, wholesalers learned about the proper handling of mangoes, which is important to prevent any damage while weighing and handling. Wholesalers were also trained on the proper grading and use of plastic crates (instead of bamboo baskets) for transporting mangoes. The reduced use of bamboo baskets in the future will help decrease post-harvest losses. In general, at least one kilogram of mango per 20-25 kg basket can be saved from spoilage. The economic value of using crates is enormous, as one truck carries about 400-500 crates resulting in a savings of 500 kg mango per trip, increasing the final value by \$305-\$427.

Reducing Mango Losses During Transport

As a result of PRICE's interventions, Bonolota Mango Producers Cooperative Society Ltd. has started using wooden boxes instead of bamboo baskets for transporting mango. This innovative marketing approach reduced post-harvest losses to zero and consumers were able to order garden fresh ripe mango within a day. The association has already successfully marketed 1,240 kg of mangoes with zero loss.

D. CROSS-CUTTING ISSUES

D.1. Safe Vegetables

D.1.1. Promotion of Safe Vegetable Production in the Dykes of South

Commercial vegetable farming in the dyke, a new intervention developed and designed by PRICE, focuses on farming small strips separating water bodies, which traditionally had no use except delimiting the ownership of the water area used for fish culture and cultivation of single rice crops. Through PRICE's interventions, these strips are being slowly turned into commercial vegetable culture through the adoption of new planting techniques, use of trellises, multi-strata cropping along with compost use, and several integrated crop management techniques.

PRICE has been focusing its efforts to support enterprises in the FTF districts, located in Khulna and Bagerhat, which have more water bodies and low lying areas vulnerable to climate change. PRICE supported Renaissance, a local enterprise located at Chitolmari of Bagerhat, to establish a contract farming model involving 2,100 small-holder farmers (66 percent female) who had no previous experience in dyke farming. Farmers were trained on dyke preparation, improved production techniques, use of improved inputs, and compost use.

Renaissance also organized a supply of seeds, fertilizer, pesticides, and credit for its dyke farmers. The enterprise supplied chemical fertilizer to 1,350 vegetable farmers, good quality vegetable seeds from reputed companies (mainly Lalteer and Syngenta) to 950 vegetable farmers, and pesticides to 998 vegetable farmers. Renaissance also provided hands-on training to 540 vegetable farmers on seed-bed preparation and compost for use in dykes.

PRICE supported another southern-based enterprise, EFADF Agro Business, in organizing small dyke-based vegetable farmers for safe vegetable cultivation through contract farming at the southern fringe of Khulna, adjacent to the Bagerhat districts. The enterprise organized two-day farmer trainings for 1,440 farmers. The training focused on improved technology for safe vegetable production through contract farming at Ballavpur, Patharghata, Betaga, and Lockpur. The trained farmers were provided with seeds and compost for organizing vegetable cultivation during winter and summer. Trainings on planting, spraying, harvesting, and post-harvest handling for 180 field workers were also held. The enterprise ensured the supply of high quality summer vegetable seeds from Lalteer Seed Company and ACI to 873 contracted farmers. EFADF supported farmers in land preparation for cultivating summer vegetables and supplied 7,635 kg of compost to 389 farmers for vegetable production. EFADF farmers have seen an increase in production of 12.5 percent over the last season and reduced the use of chemical pesticide by about 75 percent.

D.1.2. Information Dissemination and Other Services to Dyke Farmers

EFADF organized information dissemination meetings at the enterprise's farmer information center where field supervisors and field extension agents from the Department of Agriculture Extension (DAE) provided technical advice on production-related problems, inputs, and market price information for vegetables. Furthermore, the enterprise also arranged financial credit of approximately \$62,390 for inputs, particularly fertilizer and seeds, for vegetable farmers and linked them with quality fertilizer and seed dealers. PRICE partner Renaissance also opened five service centers to provide inputs and technical information to the farmers. The enterprise supplied 1,000 kg of high quality okra, tomato, bottle gourd, cucumber, bitter gourd, ash gourd, and pumpkin seeds, procured from Lalteer Seed Company, Supreme, Delta, and ACI, to farmers. Renaissance also supplied 4,000 kg of fertilizer to 2,000 farmers through its service centers.

D. CROSS-CUTTING ISSUES

Through the information dissemination meetings held regularly at different points in Lockpur, Bal-lavpur, Hosla Ghospara, Patharghata, and Betagi of Khulna, 525 vegetables farmers were given weekly production tips for growing vegetables based on local growing conditions and weather.

D.1.3. Introduction of a High Value Vegetable, Summer Tomato, in the South

Summer tomato is a highly profitable but risky crop because it is prone to disease infestation and rain. PRICE worked with PRIDE Agro Enterprise to encourage current smallholders to grow tomatoes. Farmers planted summer tomato varieties BARI-4 and BARI-8 on 15.2 ha. Technical support was given to farmers in terms of disease prevention, crop management, drainage, irrigation, preparation and maintenance of shade, and pruning.

Jagoroni Agro Enterprise provided two-day long trainings to 300 farmers in ten batches on summer tomato production and management during April in the Bagharpara union of Jessore Sadar Upazila. After the training, the participants started tomato cultivation.

Rural Reconstruction Foundation (RRF) and PRIDE Agro Enterprise organized training for 300 tomato farmers on improving summer tomato cultivation technology in the Jessore district. During the training session, farmers learned about new summer varieties, fertilizer management, post-harvest handling, including proper harvesting time, cleaning, sorting, packaging and grading, cost of production and expected income.

D.2. Vermi and Tricho Compost

D.2.1. Assisting Sustainable Production through Soil Nutrient Replenishment

PRICE has been supporting three compost making enterprises, two in the north and one in south, to raise awareness on the advantages of using compost among farmers and to provide technical know-how on proper application methods and quantity, along with other micronutrients for different crops. Since January 2012, GKSSE has conducted trainings for vegetable farmers in Bogra, Rangpur, Gai-bandha, and Joypurhat on the use and importance of compost for sustainable vegetable production and minimizing the cost of fertilizers and pesticides for vegetable production as part of their marketing strategy.

PRICE supported GKSSE of Bogra, Riya Fertilizer of Shirajganj, and BioTech Agro Complex of Chuadanga, in organizing trainings on the application methods and benefits of using vermi- and tricho- compost, application method and time, availability, cost, and comparative advantage. Additionally, PRICE supported the organization in providing an orientation course for DAE's field staff.

During FY 2012, GKSSE trained 1,656 vegetable farmers and delivered an orientation course for 65 DAE field staff members. Riya Fertilizer organized trainings and group meetings for 595 small vegetable farmers and 104 DAE field workers. Farmers who had used the compost previously reported that they benefitted from using the compost. The trainings helped increase yields by about 20 percent while reducing production costs by 30 percent and extended the harvesting period by at least fifteen days.

In the south, since September 2012, PRICE has been supporting BioTech Agro Complex of Chuadanga to increase its capacity in the production, promotion, and marketing of bio-compost to enrich soil in the south and make it a good substrate for sustainable crop production. This year, the enterprise organized trainings on the use and advantages of compost in vegetable crops for 700 egg-plant, pumpkin, and summer cabbage farmers of Munshiganj and provided sample compost for use in different crops.

D. CROSS-CUTTING ISSUES

D.2.2. Promotion of Compost through Demonstration Plots and Farmers' Field Days

With support from PRICE, numerous demonstrations to showcase the positive effect of compost usage were completed. Partner organizations took the lead to organize demonstrations as illustrated in the table below:

PRICE partner	Vegetables	No. of Demos	Regions
GKSSE	Potato, radish, bitter gourd, cabbage, cauliflower, onion, chili, eggplant, bean, eggplant, pumpkin, pointed gourd	49	Pachbibi, Bogra Sadar, Joypurhat Sadar, Kalia Shibgonj, Mithapukur, Polashbari.
Riya Fertilizer	Cucumber, bitter gourd, potato, eggplant, onion, garlic, pumpkin, and green chili	32	Ullapara, Gurudaspur, Boraigram, Tarash, Mohonpur, Shajahanpur, Sirajganj
BioTech	Eggplant, cabbage, and cauliflower	7	Meherpur Upazila

The demonstration plots proved to be very effective in transferring knowledge and promoting adoption of compost among farmers in the community.

Additionally, PRICE also helped Riya Fertilizer, GKSSE, and BioTech organize several farmer's field days in Dumurgram, Murail, Kahaloo, Bogra, Pirozpur, Miarhat, Mithapukur, Rangpur, and Meherpur as an information exchange for farmers, where they can share knowledge and learn from each other's experiences. Additionally, farmers also received expert opinions and observed the effects of adopting better crop management practices using vermi- and tricho- compost in eggplant.

GKSS Agro Enterprise organized 16 farmer's field days in Dumurgram, Murail, Kahaloo, Bogra, Pirozpur, Miarhat, Mithapukur, and Rangpur to observe the effects of adopting better crop management practices along with using vermi- and tricho- compost in eggplant. Riya Fertilizer organized six late winter field days in Sirajgonj, Mohanpur, Borigram, and Ullapara, reaching 600 vegetable farmers.

On average, field days had a positive impact on participants, where farmers experienced a 25-45 percent increase in yields compared to when traditional methods of cultivation and chemical fertilizer are used. They were also introduced to attractive quality products and healthy plants with longer effective fruiting periods.

GKSS Enterprise also organized 60 video shows on the benefits of compost for sustainable production and high profitability in different locations.

Seeing is Believing

In one plot of .05 ha, farmer Tariqul Islam harvested 1,920 kg of eggplant after adopting compost use. From his other (control) plot, he harvested only 1,280 kg of eggplant, following traditional practices. He had 50 percent more yield and an additional income of approximately \$98 by adopting new technology.

On another .02 ha plot, Mr. Hasen Ali Bepari had a harvest of 2,560 kg of eggplant grown with compost. He also harvested 640 kg of eggplant on the other plot where he did not apply compost and better management practices. The yield between the two plots was 70 percent more and approximately \$193 more in earnings.

D. CROSS-CUTTING ISSUES

D.2.3. Marketing Seminar on Compost

PRICE assisted GKSSE organize two seminars for 78 input dealer/retailers at Palashbari, Gaibandha districts at Panchbibi, Joypurhat district, where technical experts discussed the importance of compost and bio-fertilizer on sustainable crop production and maximizing yield, underscoring the economic, environmental, and health benefits. Afterwards, interactive sessions were held where dealers asked questions regarding the marketing system, pricing, and transportation, packaging, and dealer/retailer incentives.

In addition, Riya Fertilizer also organized a training session for retailers in June in the Tarash upazila in Sirajganj where 15 input retailers attended and learned about the importance of using compost and business incentives offered by the company.

D.3. Vegetable Seeds

D.3.1. Supporting Backward Linkages and Knowledge Dissemination

Seed is one of the major inputs attributing to yield. However, southern farmers have very limited access to good quality seeds. This is mainly due to the lack of knowledge and poor access to information regarding modern varieties and cultivation techniques, high price of hybrid seeds of reputed companies, and fewer incentives of seed retailers in selling those compared to nondescript local seeds. As a result, vegetable production in the south is low, and there are few incentives for the farmers to grow vegetables.

PRICE, in collaboration with Lalteer Seed Company, facilitates access to good seeds by improving the capacity of seed dealers and retailers of the south, so they can better serve farmers by providing good quality seeds and technical information. PRICE supported Lalteer Seeds in organizing a two day long training to dealers of eight districts (Bhola, Barisal, Pirojpur, Jhalokathi, Patuakhali, Jessore, Madaripur, and Borguna) on seed quality, production, and business ethics. In turn, these dealers provided better service and disseminated the farming knowledge to the farmers and retailers.

In addition to training dealers, 480 demonstrations of new hybrid vegetables were held at different locations in eight districts - Barisal, Jhalakathi, Pirojpur, Patuakhali, Barguna, Madaripur, Bhola, and Jessore. PRICE assisted Lalteer Seed in organizing 31 farmer field days and 286 technical discussion meetings across Barisal to promote technology diffusion on hybrid vegetable cultivation.

D.3.2. Promoting Good Quality Vegetable Seeds in the South

PRICE assisted M/S Padma Seeds; a southern-based small private seed company to expand its own seed production facility to cater to the local demand of high quality open pollinated varieties of vegetable seeds within the affordable limit of small poor vegetable farmers. The enterprise contracted 750 farmers with 150 ha of land spreading to Gangni Poursava of Gangni *Upazilla* of Meherpur district, Sarojgonj of Chuadanga *Sadar Upazilla* and district, Holidhani union of Jhenaidah *Sadar Upazilla* and district and Johurpur union of Bagharpara *Upazilla* of Jessore.

PRICE supported the enterprise in providing theoretical and practical training to all of its contract farmers growing specific types of seed. The trainings focused on seed generation, planting techniques, crop management, rouging, isolation, plant and crop protection, soil nutrient management, harvesting of seed and fruits, post-harvest handling, seed cleaning, drying, and packing. In addition, seed production technical support was provided and quality checking continued during the growing period. Following the training, the enterprise provided foundation and certified seeds, required inputs, and credit to farmers to help them successfully grow crops.

D. CROSS-CUTTING ISSUES

This year, the enterprise procured more than 143,844 kg of high quality vegetable seeds (ribbed gourd, cucumber, red amaranth, eggplant, chili, yard long bean, okra, and bottle gourd) from seed producing contract farmers.

D.4. Market Linkages

D.4.1. Facilitating Market Linkages

In Bangladesh, most horticultural crops are traded fresh and a very negligible quantity is processed. Contract farming for fresh horticultural produce is not in existence and access to finance for market operators is not easy. To address this, PRICE is working with Renaissance, EFADF, GKSSE, Riya Fertilizer, Padma Seeds, Konica Seed Company, and other partners, in market promotion and building new market linkages.

For example, Riya Fertilizer appointed its own marketing agent in seven districts (Jessore, Kushtia, Joypurhat, Pabna, Natore, Rajshahi, and Sirajganj) to link with 80 input retailers to organize and expand its marketing network. The company marketed 698 mt of compost and 3,000 L of tricho liquid. As a part of market promotion, 185 sub-assistant agriculture officers of Natore and Sirajganj were given orientation courses on product quality and benefits to better advise farmers how to use the product.

EFADF Agro Business marketed 5,606 mt of safe vegetables from its contract farmers, mostly dyke farmers. PRICE helped EFADF Agro Business establish links with wholesalers and marketing agents in Khulna and Dhaka, earning sales revenue of approximately \$989,394. The enterprise created casual employment for 1,924 men and 1,255 women during this period. In addition, PRIDE Agro Enterprise marketed 1,780 mt of vegetables and established market linkages for their farmers.

D.5. Other

D.5.1. USAID Team Visits PRICE Project Site at Khulna



Picture: USAID team visits PRICE partner EFADF Agro Business dyke farming area in Khulna

On August 31, 2012, Mr. Paul Weisenfeld, assistant to the USAID Administrator and head of USAID's Bureau of Food Security, Ms. Denise Rollins, senior deputy assistant administrator USAID/A, and Mr. Amit Mistry, USAID/W visited a PRICE project site at Tilok village, Lokpur, Khulna. The team was accompanied by Mr. Richard Greene, USAID mission director, and other

D. CROSS-CUTTING ISSUES

USAID officials to observe year-round vegetable dyke farming (along with fish and rice). Through PRICE's partner, EFADF Agro Business, PRICE introduced year-round vegetable cultivation in fallow dykes, trained farmers on production technology, organized the supply of good quality inputs, especially hybrid seeds and composts, promoted the adoption of safe pest management, and linked farmers to the market to sell their products at fair prices.

The team visited dykes various summer vegetables, including cucumber, sponge gourd, yard long bean, and ridged gourd on a multi-strata trellis over water bodies. The PRICE chief of party and horticulture team leader briefed the team. Later an interactive discussion was held with 20-22 men and women farmers and the visiting team. They informed the visitors that their income increased tenfold over a period of five years.



Picture: PRICE partner EFADF Agro Business beneficiary dyke farmer in Khulna



Section II

Aquaculture

OVERVIEW

In addition to being the major source of high-value animal protein in the country, and addressing both malnutrition and food security, aquaculture plays a vital role in Bangladesh's economic progress by providing family earnings and employment opportunities. Although the aquaculture industry has grown significantly over the years, its full potential has not yet been realized and increased development is required to keep up with growing demands.

In Bangladesh, fish and shrimp farming cover approximately one million hectares. Fish farming areas are mostly small and located in fragmented, closed water bodies very often at household levels. Shrimp farming is mostly concentrated in the southwestern coastal belts with freshwater prawn in coastal areas with mild salinity or seasonal fresh water.

Both fish and shrimp farming have great potential for growth throughout their respective production, supply, and value chains. Currently, in the domestic market, fish has growing potential due to its huge unmet demand. At present, there are 30 aquatic farmed species and the market for both low cost and high cost value species is expanding. Shrimp is also extremely important as an export commodity. Although Bangladeshi shrimp is well received by the international market, and receives a high export price due to its large size, it is only a small fraction of the international market. In FY2012, Bangladesh earned approximately \$600 million in foreign currency by exporting fish and fisheries products.

During FY2012, the PRICE aquaculture sector focused on the overall improvement of production by promoting good aquaculture practices. This included the use of high quality seeds, higher stocking densities, high quality grade feeds, and improved management practices that increased yields without increasing disease and mortality rates. PRICE worked with more than 70 partners to increase competitiveness among micro, small, and medium enterprises (MSMEs) that include fish-input suppliers, hatcheries, farmers, traders, processors, exporters, and public entities. During FY2012, a total of 28,123 fish and shrimp farmers were trained on improved farming technology. Among them, 22,242 of these farmers were also trained on improved management techniques. In addition, 1,770 workers were trained for workforce development. PRICE also continued its initiatives on market linkages between farmers, depots, wholesalers, and processing plants by providing access to better inputs for farmers. As a result, PRICE aquaculture partners increased sales by \$52.5 million, created 19,001 new full time jobs in the sector (5,737 in fish and 13,346 in shrimp) and invested an additional \$12.2 million in their businesses.

FY2012 Achievements in Aquaculture (Oct'11-Sep'12)

<i>Sales increased</i>	\$52.5 million
<i>New jobs</i>	19,001
<i>Investment increased</i>	\$12.2 million
<i>Farmers trained in technology</i>	28,123
<i>Farmers trained in management</i>	22,242
<i>Persons trained in workforce development</i>	1,770

A. FISH



By working with 50 partners in the fish subsector throughout the country, PRICE facilitated trainings, counseling, and hands-on lessons to farming associations and helped strengthen their market linkages with different supply chain and value chain actors.

These trainings focused mainly on improved farming techniques, proper use of high quality grade inputs, and the advantages of procuring inputs as a group and group marketing. In linkage building initiatives, the beneficiary farmers were linked to high quality seed producing hatcheries, nurseries, and feed millers through dealers/sub dealers. Additionally, nurseries were linked to better hatcheries, and hatcheries were linked to trustworthy brood sources. PRICE also facilitated exposure visits for leading farming groups which allowed knowledge sharing between the farmers. As a result, knowledge and skills shared among the partners were significantly increased.

During FY2012, PRICE facilitated trainings for 21,796 farmers on improved technology. Among these farmers 19,425 were trained in management and 820 workers received training as a part of the workforce development program. Overall, PRICE's fish subsector partners increased their sales by \$44.2 million, investments were increased by \$2.5 million and 5,737 new jobs were created.

FY12 Achievements in Fish (Oct'11-Sep'12)

<i>Sales increased</i>	\$44.2 million
<i>New jobs</i>	5,737
<i>Investment increased</i>	\$2.5 million
<i>Farmers trained in technology</i>	21,796
<i>Farmers trained in management</i>	19,425
<i>Persons trained in workforce development</i>	820

A. FISH

A.1. Promoting Cage Culture and Community Farming

During FY2012, PRICE promoted cage culture, an emerging new technology. Cage farming is a relatively new technology in Bangladesh and the culture of mono-sex tilapia was recently started in Chandpur and Lakshmipur areas. PRICE supported the improvement cage farming by supporting the Bangladesh Cage Culture Owner's Association (BCOA) through specialized trainings and demonstrations. During 2012, PRICE facilitated eight training programs for more than 200 participants. PRICE has also taken the initiative to promote cage farming in the southwest, especially in coastal lowland areas, as these areas are particularly vulnerable to natural calamities such as cyclones, which cause farmers huge financial losses. Cage farming mitigates some of this risk as cages can be salvaged by quick harvest.

PRICE also focused on management-based community farming during 2012. PRICE continued to provide assistance to two community based initiatives in Sherpur and Jamalpur to create livelihood options through fish farming. These groups were encouraged to procure additional water bodies and initiate new fish farms. With PRICE's assistance, Nokla Motsojibi Samity (NMS) and Bamunji Beel Motsojibi Samity (BBMS) trained 200 and 100 farmers respectively on *beel* management, nursing, judicious harvesting, post-harvest handling, and cool chain management.

A.2. Training to Promote Sustainable, Better Farming Practices and Improving Productivity of Small Scale Household Farms



Picture: Fish farming training by PRICE partner Shushilon in south west Bangladesh

In FY2012, PRICE continued its activities in promoting sustainable, improved farming practices by facilitating several training programs and technical assistantships through our partner organizations. PRICE also arranged several trainings for small scale household famers to develop their farming skills.

During this year, PRICE facilitated a total of 994 training events for 21,796 fish farmers (12819 male, 8,977 female). These trainings included guides on seasonal crop rotations and household farming technologies which covered high density, integrated, and semi-intensive culture systems. The trainings also promoted improved practices and farming techniques without endangering ecosystems, good fish farm management (GFFM), and good aquaculture practices (GAP). Trainings included sessions on the reduction of water pollution, responsible waste management, judicious feed usage, and techniques to increase natural productivity and prevent diseases.

PRICE also facilitated several training programs on productivity for small scale household farmers. Through these training sessions, a large group of women farmers and ethnic minorities were involved in improved fish farming who had previously only released fish fries/fingerlings in their derelict ponds.

A. FISH

The chart below detailing the partners with women majority farmers and the number of participants trained in productivity, disaggregated by gender.

Partner	Participants		
	Male	Female	Total
Society for Social Services	58	1192	1250
Gondhamari Matsyajibi Samabay Somity	-	500	500
Rakhaing Development Foundation	809	641	1450
Jeno Saba Kendra	160	340	500
Chitra Unnayan Kendra	569	231	800
Shushilan	779	421	1200
Center for Integrated Social Development	256	244	500
DEESHA	141	359	500
Polli Bodu Kalan Sangstha	457	393	850
Mulia Matsyajibi Somity	120	380	500
Banchte Shekha	552	348	900
		Total	10,700

A.3. Farmer Access to Better Inputs and Improving Embedded Services by Input Sellers

As a part of promoting better fish farming, PRICE facilitated trainings for the lead farmers of the partner hatcheries on better fish farming techniques, including nursery operation and utilizing quality fry. During FY2012, 250 hatchery allied nursery operators and 3,800 farmers received training on selecting quality seeds which helped them to increase their production with inbreed-free fish seeds. PRICE also linked nursery operators to PRICE partner hatcheries for access to quality seeds and fries.

In addition, PRICE arranged training programs for a fish seed traders association, Digerkanda Matsyapona Bebohashi-Kallan Bohumoukhai Samoby Somity (DMBBS) in Mymensingh on responsible transportation and embedded services and provided each member with an operational manual for fish seed business (in Bangla). PRICE assisted Fishtech Ltd. (FTL) in training 375 inputs selling dealers and agents and 125 lead farmers to strengthen their embedded services to farmers. SMS Feeds Ltd. also trained 300 dealers and sub-dealers on improved fish farming management, in order to provide better technical services to their farmer-customers.

A.4. Increasing Small Farmers' Access to Micro-Credit

Access to institutional credit is difficult due to lease-based land, small water holding farms, and multi-ownership of land. These small scale farmers often lack resources suitable for collateral to pursue bank loans and the weekly repayment model of micro-credit loans is not suitable for fish farmers as fish do not grow quickly enough to be sold within a couple of weeks. To overcome farmers' cash flow problems PRICE proposed a new harvest-based repayment schedule to its partner microfinance institutions and it was accepted by three local NGOs namely; Janoseba Kendro (JSK), Society for Social Service (SSS) and Trinomul Manobik Unnyan Sangstha (TMUS).

A. FISH

As a result, a total of 791 micro and small scale farmers (476 female; 315 male) obtained loans ranging from 3,000 to 15,000 BDT (approximately \$37 - \$182), with farmers' groups and associations acting as guarantors of the loan.

A.5. Increased Outreach of Better Farming through In-Country Study Trips

To increase knowledge sharing, lower performing value chain actor groups were invited to visit relatively higher performing partners. Through these visits the transmission of information, knowledge, and skills among partners was significantly accelerated. In total, during 2012, PRICE arranged 49 separate in-country study trips that enabled 697 lead farmers to upgrade their culture practices.

A.6. Group Strengthening and Promoting Hygienic Dry Fish Manufacturing

In partnership with the Nazirteak Fish- Dryer's Multipurpose Cooperative (NFMC) in Cox's Bazar, PRICE assisted hygienically safe dry fish manufacturing, packaging, and marketing. Trainings were conducted for 150 yard owners and 300 workers on hygienic dry fish production, personal hygiene, and packaging. As part of organizational strengthening initiatives, the project and NFMC facilitated a two-week long organizational strengthening training, jointly with 'Farmer to Farmer' program of Winrock International (FtF WI), for its 17 executive members, 10 lead yard owners and 11 female workforce group members.



Picture: Participants of Nazirteak Fish- Dryer's Multipurpose Cooperative (NFMC) in organizational strengthening training.

B. SHRIMP

Two species of shrimp are commercially farmed in Bangladesh, the freshwater *golda*, and the brackish water *bagda*. Shrimp exports account for 77 percent of the total income from fish and fishery products.

In FY2012, the shrimp sector earned approximately \$435 million.

Overall, the shrimp sector is very promising in Bangladesh, but it is facing several challenges to reaching its potential such as low farm yield, poor quality, and a high incidence of viral diseases. In addition, malpractice, alleged adulteration, and contamination are other negative factors which can be avoided by introducing better traceability and maintaining environmental compliance regulations and Bangladeshi labor laws.

PRICE mainly works with *bagda* shrimp farming associations whose farming areas are in southwestern coastal districts. The project is trying to mitigate the constraints through the initiatives below:

- Popularizing virus negative screened post larvae (PL) for better production avoiding common disease risks;
- Higher yield of healthy and disease free larger sized shrimp;
- Observance of international codes of conduct (COC) throughout the value and supply chain; and,
- Increasing awareness against adulteration and malpractice.

PRICE built partnership with 19 enterprises, associations, and processing plants and collaborated with Bangladesh Frozen Foods Exporters Associations (BFMEA) to tackle the challenges that the subsector faces.

During FY2012, through these partners, PRICE facilitated numerous training sessions and counseling and yard meetings where farmers observed demonstrations on improved farming methods such as crop rotation, farming integration, and use of disease free and screened post larvae (PL). Additionally, PRICE facilitated several workshops to create awareness against malpractices and adulteration and traceable production. PRICE also worked with processing plants on compliance issues like labor laws, bio-security measures, Hazard Analysis and Critical Control Points (HACCP), standard operating procedures (SOP), sanitation standard operating procedures (SSOP), value added product development, and building the capacity of their managerial and processing staff.

PRICE facilitated trainings for 6,327 shrimp partners, of which 2,817 also received management training. In addition, 950 persons received workforce training. This year, shrimp subsector partners increased their sales by about \$8.4 million and invested \$9.7 million in the sector. A total of 13,265 new jobs were created in the sector.

FY2012 Achievements in Shrimp (Oct'11-Sep'12)

<i>Sales increased</i>	\$8.4 million
<i>New jobs</i>	13,265
<i>Investment increased</i>	\$9.7 million
<i>Farmers trained in technology</i>	6,327
<i>Farmers trained in management</i>	2,817
<i>Persons trained in workforce development</i>	950

B. SHRIMP

Shrimp Farming Techniques

In Semi-Intensive Farming (SIF), shrimp is farmed for a short period of time under high density, artificial aeration and receives supplemental feeding at satiation point daily in farming areas strictly isolated from the outside environment by strong dykes. Culture water is treated with bleaching and the farming complex is surrounded with a fine synthetic mesh to keep crabs and other intruders out. It also prevents viruses from entering the farming zone with mono-species stocking. Screened, virus-negative PL is stocked at a rate of 10-15/m² in the first crop and 5-10/m² in the 2nd. A SIF under Bangladesh condition produces 4,000-5,000 kg/ha/year.

In Closed System Pond Technology (CST), a farm is a replica of the SIF farm. It is small in size and maintains a relatively lower stocking density at a rate of 8-10 PL/m². A CST farm may produce two crops annually for a total of 2,500-3,000 kg of shrimp/ha.

In Modified Traditional Technology (MTT), pond water is also treated with bleach, but screened PLs are stocked at a rate of only 2-3/m². No water intake or paddle wheels are used, and homemade feed instead of commercial feed is usually employed. MTT produces only one yearly crop, with a yield of 350-400 kg/ha. Pre-nursed, plankton-feeding carp and some *golda* are stocked together with *bagda* during the wet season which increases the overall yield and crop diversity.

Traditional Best Management Practices (TBMP) is practiced by farmers who can't afford, or are not interested in, relatively higher density farming. These farmers do not bleach the culture water and stock at a rate of only one PL/m², but do fertilize the water to enhance natural productivity, remove aquatic plants, and screen incoming water to prevent predators. TBMP farmers achieve yields of 250-275 kg/ha/year, still approximately 20% more than traditional farming.

B.1. GHERS Initiative (Greater Harvest and Economic Return from Shrimp)

In the shrimp subsector, PRICE implemented most of the interventions under the GHERS initiative through PRICE's subcontract with the World Fish Center (WFC). The broader aim of GHERS is to shorten the gap between demand and supply by increasing the farms' productivity and integrating the farmers with the necessary value chain actors to comply with the high quality standards of shrimp products.

The project has piloted a new approach to integrate the value chain actors, to build greater consensus and to demonstrate the viability and effectiveness of the approach. GHERS has been directly supporting depots with technology and technical staff to increase their capacity to integrate with the stakeholders; particularly in transferring the technical knowledge and skills to shrimp farmers through group creation.

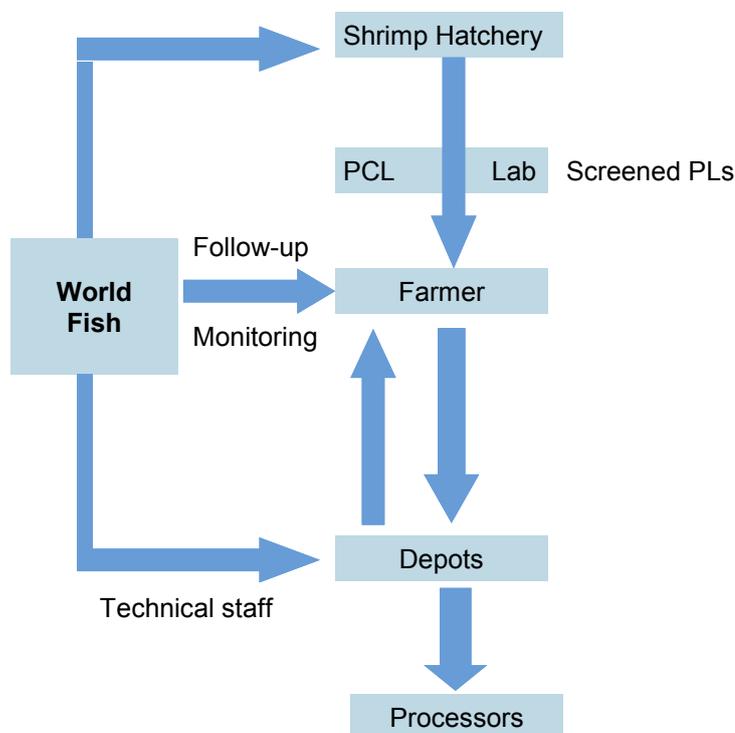


Figure: 1: Flow diagram of GHERS implementation strategy

B. SHRIMP

B.2. Supporting Semi-Intensive and Season- Based Crop Rotational Farming

This year, PRICE supported Gazi Fish Ltd. (GFL) and S&M Shrimp Culture Ltd. (SMSC), two semi-intensive shrimp farms, to upgrade their technology and trained their staff to prepare them to demonstrate model farms for others farmers, including GHERS beneficiaries. Both of the farms used screened PL for their ponds and PRICE assisted trainings to train 100 workers on judicious pond preparation, feeding, sampling, harvesting, and post-harvest treatments including cool chain management. Additionally, GFL started producing screened PL and sold them to the Khulna region farmers.

PRICE also encouraged crop rotational fish farming with shrimp among the beneficiary farmers in the southwest region to restrict the disease outbreaks in the GHERS area. PRICE facilitated trainings for approximately 280 shrimp farmers on integrated fish farming and seasonal rotations between *golda* and *bagda* farming which will result in more sustainable production while minimizing the associated disease risks.

B.3. Promoting Virus-Negative Screened Post Larvae

PRICE supported the Pranti Polymerase Chain Reaction Laboratory (PCRL) through WFC, to continue its testing procedure of shrimp seed production cycles to ensure a virus negative PL supply for the shrimp farmers. During FY2012, Pranti PCR Laboratory, with the support of seven hatcheries in Cox's Bazaar and Khulna, tested and certified 174 million virus negative PL of which roughly 69 million PL were used by GHERS farmers.

In addition, PRICE also facilitated trainings for roughly 1,500 shrimp farmers from six farming associations in Khulna and Cox's Bazar (independent of the GHERS initiative) which aligned with Pranti to popularize screened PL use for *bagda* farming.

B.4. Awareness Creation against Malpractice and Adulteration

Malpractice and adulteration are two of the major issues in the shrimp export industry. Due to an unfavorable image and negative propaganda abroad, BFFEA supported the maintenance of the natural quality of contamination and adulteration free raw materials. The project identified that the root cause of the quality deterioration of raw materials is producers' ignorance coupled with some supply chain actor's intentional adulteration. To overcome these issues, PRICE, in cooperation with BFFEA and Department of Fisheries (DoF), organized 14 awareness raising workshops for farmers and other supply chain actors in 14 areas of Satkhira, Khulna, and Bagerhat districts located in the southwest region of the country. As part of the national campaign with DoF and Ministry of Fisheries & Livestock (MoFL), 30,000 posters were distributed in 483 upazillas throughout the country to disseminate messages among the target groups. Also, thousands of leaflets were distributed with similar messages to participants attending the workshops and hands on training sessions which consisted of sub-depots, depots, accumulators, suppliers, processing plants, agents, and other concerned actors.

B. SHRIMP

B.5. Initiative for Value-added Product (VAP) Development

Bangladeshi frozen fishery items for export are mainly confined to block or individual quick freezing without any significant value addition, unlike ready to cook or ready to eat products. Understandably, the price received by Bangladesh exporters is far below the premium price received by other shrimp and prawn exporting countries.

To assist partner processing plants to develop their capacity for value-added product development, a consultant from the United States, arranged by USAID's FtF WI program, provided supports to two processing plant partners, Organic Shrimps Export Ltd. (OSEL) and Rupali Sea Foods Ltd. (RHFL) located in Khulna. The consultant worked closely with the processing plants for three weeks and collaborated closely with top and mid-level management, and technicians for demonstration of VAPs. Management was quite satisfied with the outcome of the assignment due to the innovative designs it obtained on VAP development.



Picture: PRICE beneficiary shrimp farmer Marium Begum of Jessore



Section III

Leather Products

OVERVIEW

In FY 2012, the entire leather industry experienced slow growth in exports. According to the Export Promotion Bureau, growth in FY 2012 was 17 percent compared to 41 percent in FY 2011. Exports declined due to economic troubles in the United States and in the European Union (EU). Industry experts and stakeholders believe that the root cause of the downward trend in the footwear sector started at the beginning of the recession when importers became more conservative in regards to value-added products.

However, compared to other manufacturing sectors, the overall leather sector performance in FY 2012 was stable. This year, the leather sector grew by 17 percent and earned \$765 million in revenue, of which nearly \$435 million, or 57 percent of the sector's total revenue, was derived from footwear and leather products. The sector's overall strategic target was \$792 million.

As indicated in the table below, the leather sector earned \$796 million during this reporting year (October 2011-September 2012), which is a 1.8 percent decrease over the same period of October 2010-September -2011.

Table: Percentage change of export performance, Oct-Sep. FY2012 versus Oct-Sep. FY2011

Products	Export Performance Oct.-Sep. FY2011 (USD, M)	Export Performance Oct.-Sep. FY2012 (USD, M)	% change of export performance, Oct.-Sep FY2012 versus export performance, Oct.-Sep. FY2011
Leather (finished)	\$343.05	\$328.62	-5%
Leather products	\$102.28	\$126.93	24%
Footwear	\$365.09	\$340.42	-7%
Total	\$810.42	\$795.97	-1.8%

Source: Export Promotion Bureau

In FY 2012 (Oct 2011-Sep 2012), the PRICE leather products sector facilitated trainings for 3,500 leather workers (male 1,300, female 2,200) on cutting, sewing and lasting and for 75 SMEs on improved technology and management. PRICE, in collaboration with its leather partners, also assisted 21 SMEs in obtaining access to formal loans. PRICE's intervention created 2,700 new jobs, generated \$36 million in additional sales, and stimulated \$0.2 million in investments.

FY2012 Achievements in Leather Products (Oct'11-Sep'12)

<i>Sales increased</i>	\$ 36.3 million
<i>New jobs</i>	2736
<i>Investment increased</i>	\$ 180 thousand
<i>Firms trained in technology</i>	76
<i>Firms trained in management</i>	58
<i>Persons trained in workforce development</i>	3,496

A. ASSISTANCE TO SME DEVELOPMENT



Picture: PRICE supported leather SME Dia Enterprise factory at Hazaribagh, Dhaka

PRICE continued supporting partner SMEs through various initiatives, such as building linkages with emerging markets, including backward linkages, providing technical assistance and trainings on improved technology and management, and promoting access to finance.

A.1. Access to Finance

A.1.1. Supporting SMEs for Better Access to Bank Loans under EBL Uday Initiative

The SME Foundation and Eastern Bank Limited signed an agreement for the Credit Wholesaling Program in November 2011, where they launched their SME loan product 'EBL Uday,' a specialized product developed for leather sector SMEs with two salient features - a single digit interest rate and no collateral requirement.

As of June 2012, a total of 21 small enterprises received loans worth approximately \$118,902 as working capital.

A.2. Training

A.2.1. Supporting Aarong Subcontractor SMEs to Strengthen Institutional Capacity

In 2010, PRICE partnered with Aarong to support Aarong's subcontracting SME producers to develop their capacity. Initially, PRICE worked with owners of 20 enterprises and facilitated 'technical and motivational' trainings.

Given the success of this program, PRICE extended its support for more Aarong SME producers through providing in-depth technical training for Aarong's existing 55 subcontractors' workers and supervisors.

The program covered the following topics:

- **Basic Materials Management:** properties of leather that influence quality; factors in procuring appropriate leathers; storage; post mortem solutions; and, handling problems.

A. ASSISTANCE TO SME DEVELOPMENT

- **Accessories and Sundries Management:** characteristics of accessory items including metallic and plastic items; factors in procuring appropriate sundries; storage; and, handling problems.
- **Stitching and Prefabricating:** prerequisites for high quality stitching including needle, thread, thread length, and machine settings; adjustment of thread and bobbin pressure; skiving; edge finishing; and, the role of adhesives.
- **Improved Technology of Footwear Design and Pattern Making:** modern techniques enhancing footwear designing skills, pattern making, and, grading.

The first two training programs, ‘Basic Materials Management’ and ‘Accessories and Sundries Management’ were completed in September 2011. The third program ‘Stitching and Prefabricating’ was three months long and was completed in December 2011. PRICE facilitated this training with two industry experts who provided hands-on demonstrations for workers and supervisors of Aarong’s leather SMEs. As a part of the program, these two industry experts helped each cluster eliminate and reduce its technical limitations with existing machines and facilities.

The fourth program was designed to improve skills on footwear design and pattern making and promote best practices in management. The three-day long program was held at Aarong’s training center, Tejgaon, Dhaka in May 2012, where 25 mid-level managers/designers participated. This training aimed to enhance institutional capacity of small producers to become consistent suppliers of quality products. This was intended to strengthen their relationship with Aarong and create opportunities for more work orders from Aarong and other new entities.

According to Aarong’s management, these training programs immediately reduced the rejection rate of products submitted by its subcontractors, increased the quality of products, and improved productivity, resulting in a 20 percent increase in leather products sales, i.e. 6.7 million taka, in the month of Ramadan compared to 5.4 million taka in 2011.

A.2.2. Training Program on Productivity Development

The Center of Excellence for Leather (COEL) arranged a training program on productivity for PRICE’s partner SMEs. The 21 day long theoretical and on-job training program began in September 2012 and was conducted by Mukesh Saini, Senior Faculty Member, Footwear Design and Development Institute (FDDI), India.

This program was geared to improve the production processes of SMEs. In addition, the program aimed to bring Bangladesh’s footwear and leather goods sectors to international standards through developing workforce capacity and skills, through introducing best practices in work factor analysis, time and motion study, and productivity analysis.

A.3. Market Linkage

A.3.1. Creating Business Linkage through the 2012 Dhaka International Trade Fair (DITF)

As PRICE-supported SMEs were highly successful in the DITF 2012, PRICE, in collaboration with Leather Sector Business Promotion Council (LSBPC), supported a group of SMEs in promoting leather products in the domestic market through the 2012 DITF under the banner “Leather Cave.” This program’s goals included supporting participating SMEs in building new business linkages, strengthening old business connections, enhancing their portfolios in the market, and promoting awareness around building linkages in expanding their businesses to other SME sector players.

A. ASSISTANCE TO SME DEVELOPMENT

PRICE assisted all participants in developing their product lines for the fair, ensuring the products are displayed well, arranging potential buyer-seller meetings, and promoting the strength of Bangladeshi leather sector SMEs. Approximately 50 thousand visitors visited the “Leather Cave,” which resulted in \$100,000 spot sales and \$22,000 in future orders from corporate business houses.

Furthermore, it has been reported that 42 new potential buyers have contacted the participating SMEs. One of these buyers is Feat Fair, who contacted one of LTSE’s members, Axis Leather Products, and placed an order of 18,000 pairs of footwear valued at 1.7 million taka.

A.3.2. Promoting SMEs through the National SME Fair 2012

In collaboration with the SME Foundation, PRICE supported eight footwear and leather goods manufacturing small enterprises in developing market linkages through the National SME Fair in February 2012. PRICE assisted these SMEs in developing and displaying their product lines, preparing their company profiles, promoting them under one brand “Ozin,” and arranging buyer-seller meetings.

This initiative helped the small enterprises showcase their strengths, make significant spot sales amounting to 250,000 BDT and connect with new potential buyers. Representatives from Heidelberg Cement, a multinational company, and Basic Bank visited the small enterprise stall and showed their interest for business. As a result, Heidelberg bought 750 backpacks worth \$2,000 from one of the LTSE members, B.A.G. Also, Karigar, another member of the group, supplied 1,200 leather belt gift boxes and wallets worth \$12,551 to Basic Bank.

A.3.3. Exposure Trip for the SMEs of Leather Products Sector

Per the request of SMEs, PRICE and the Leather Footwear Manufacturers Association of Bangladesh (LFMEAB) facilitated two exposure trips to two leather and footwear factories for 15 representatives from 15 SMEs in September 2012. Sites for visits included PICARD Bangladesh Limited, a leading global leather brand, and Bay Footwear Limited, one of the largest Bangladeshi footwear manufacturers and exporters.

These visits aimed to guide SME producers towards better business practices in terms of technology and management. The SMEs also had the opportunity to interact with various stakeholders, which helped them plan strategies for positive change within their own SMEs.

In particular the following areas were discussed:

- Better production practices
- Production line
- Product quality control system
- Adopting techniques to increase product quality and finishing
- Use of the latest machineries and technologies
- Better management practices

B. ASSISTANCE TO WORKFORCE DEVELOPMENT



Picture: PRICE supported skilled development training program at Center of Excellence for Leather

The lack of skilled workers, machine maintenance technicians, and floor level supervisors in the industry poses a major constraint for leather products sector growth. Historically, there was no dedicated institution in Bangladesh producing skilled workforce for the leather sector. To address these constraints, PRICE has been working with LFMEAB and its members to develop a skilled workforce through on-the-job training (OJT), particularly for the footwear and leather goods subsectors. This OJT has helped the sector as many enterprises can now expand to export business given that they have both a skilled and semi-skilled workforce.

To continue the process of developing a skilled workforce, PRICE, in collaboration with LFMEAB and International Labor Organization, has developed a sector-specific skill development center, COEL, as a sustainable one-point service center for the industry.

B.1. PRICE-COEL's Initiatives

COEL has established itself as a one-point service center for the industry. It began its operations with training activities such as developing a skilled workforce by training workers and training machine maintenance technicians and floor level supervisors at different levels. The primary target was to develop 1,000 skilled workers and 50 supervisors through year-long apprenticeship programs, including three months off-the-job and nine months on-the-job training for workers. The workforce trainings focused on cutting, sewing, and finishing. The supervisors training focused on a mix of theoretical and practical issues to increase their management capacity.

COEL is now growing into a more comprehensive industry training organization and is gradually taking over from the association and PRICE for fulfilling the tasks of the Industry of Skill Council, and building its capacity to remain sustainable.

The following are initiatives taken by the COEL with the support of PRICE:

B.1.1. PRICE-COEL Apprenticeship Program

COEL launched its first year-long apprenticeship program in June 2011, with the goal to train approximately 1,000 footwear workers in cutting, sewing, and finishing for the footwear industry. The program ended successfully and reached its target by enrolling 1,146 workers in the program. Among

B. ASSISTANCE TO WORKFORCE DEVELOPMENT

them, 728 (218 male and 510 female) trainees successfully completed the program and were placed with full-time jobs in various leather footwear factories as semi-skilled operators.

B.1.2. Supervisor Development Program

The six-month long floor supervisor skill development program ended in February 2012 with remarkable learning results. This COEL-based initiative started in August 2011 with the primary objective of developing 50 new floor supervisors, particularly for footwear, in addition to a skilled workforce development program for developing skilled machine operators. The secondary objective of this initiative was to support COEL in becoming a one-point service center for the sector.

A batch of 50 trainee floor-level supervisors was recruited through a rigorous screening process for a comprehensive training aimed to develop their skills and help them understand the production process. The comprehensive training included troubleshooting in production, daily production planning, inventory management, manpower handling, coordination with maintenance department, etc. to promote the quantity and quality of production. PRICE engaged three trainers, who primarily used a PRICE module for this program. At the end of the program, 43 trainees successfully completed their training and are now working as full-time professionals at 34 different footwear companies.

B.1.3. Training Program for Enhancing Technical and Managerial Skills

At COEL, PRICE facilitated a day-long workshop and training session on ‘Strengthening Technological and Managerial Capacity’ for mid-level managers/floor supervisors. The session was arranged for the 43 supervisors who had successfully completed the six-month long supervisor training program from COEL. The initiative aimed to build the capacity of these new supervisors through helping them understand day-to-day challenges typically faced by mid-level managers and troubleshooting techniques. This initiative covered teambuilding, staff management and motivation, dispute handling, inventory management, Goods In Process (GIP) management, and the basics of last and adhesive applications.

B.1.4. Training of the Trainers (TOT) in Collaboration with ILO and Government of Bangladesh

In collaboration with the ILO, Bureau of Manpower, Employment and Training (BMET), and the National Skills Development Council (NSDC), PRICE supported COEL in organizing a “Training of Trainers” (TOT) program for mid-level manager/supervisors from LFMEAB’s member enterprises. A total of 27 supervisors from nine enterprises (Bata, Landmark, FB Footwear, Fortune Footwear, Apex Adelchi, PICARD, Jennys, Apex LeatherCraft, and Madina Footwear) participated in the three-day long TOT program.

The initiative’s goal was to support sector players in strengthening the capacity of their mid-level technical managers through trainings. The trainings aimed to bolster the managers’ technical and management skills, so that they can deliver trainings within their companies and assess performance of employees reporting to them. The joint secretary of the Ministry of Labor and the CEO of NSDC, Mr. Jibon Kumar Chowdhury, were chief guests of the inaugural program.

B.2. PRICE-LFMEAB-Apex Extended Training Program Ends

The tripartite agreement between PRICE-LFMEAB-Apex expired in February, 2012 and the workforce development intervention ended with significant positive results. A total of 2,500 trainees, of whom 1,795 were women, completed trainings on footwear manufacturing techniques. The program exceeded its target of training 2,200 leather workers by 300 additional trainees.

B. ASSISTANCE TO WORKFORCE DEVELOPMENT

The two-month long OJT focused on industry safety, discipline, and the basics of shoe engineering. Training for workers in the cutting department focused on cutting direction, pairing, and machine pressure, while the sewing department focused on skiving, splitting, folding, edge-finishing, thread, needle, and machine adjustment. The lasting department focused on toe and heel lasting, machine adjustment, and finishing chemicals.

B.3. PRICE-LFMEAB-PICARD Initiatives Ends

In October 2010, LFMEAB, PICARD Bangladesh Ltd., and PRICE signed a tripartite agreement to address the skilled worker shortage in the leather goods industry. Six-hundred trainees were enrolled and 520 completed the training session, which covered industry safety, discipline and the basics of leather goods engineering, cutting direction, pairing, and machine pressure (for the cutting department workers); skiving, splitting, folding, edge finishing, thread, needle, and machine adjustment (for the sewing workers), and fitting of different components, parts, finishing, packing, machine adjustment, and finishing chemicals (for the assembling workers).

During the program's second phase, a new group of 400 trainees were enrolled. After completing the training, 372 trainees joined PICARD as full-time semi-skilled operators. The trainees also received certificates upon completion of the program.

B.4. Skill Development Intervention at FBFL Ends

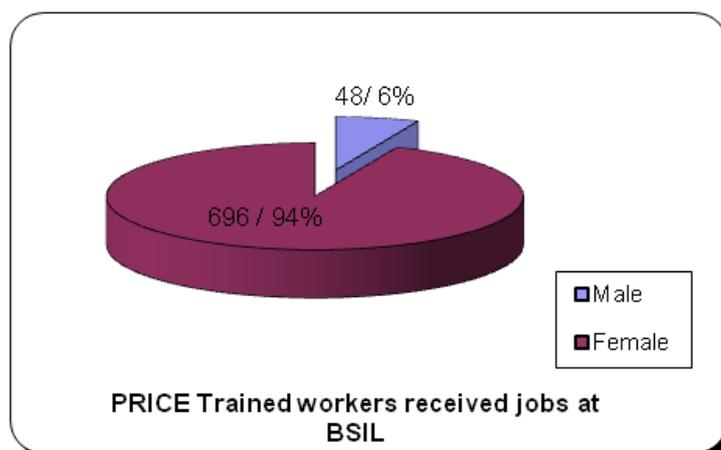
Under the tripartite agreement between PRICE, LFMEAB and Filanto Bangladesh Footwear Ltd (FB Footwear), a total of 1,900 new workers completed a two-month long skill development training in two phases. The first phase, which began in July 2010, trained 1,000 new workers. This OJT contributed significantly to the sector's growth in export earnings besides creating 835 new jobs this year in the sector.

Considering the initial program's positive impact and subsequent interest from LFMEAB and FB Footwear, PRICE supported FB for the second phase beginning in December 2011. In the second phase, another 910 trainees completed the two-month long training, of whom 65 percent were female and 835 (male 290 and female 545) were awarded with full time jobs at FB Footwear. In FY 2012, FB Footwear earned \$10 million in additional sales.

B.5. Bengal Intervention Changes Women's Livelihoods at Raipur

PRICE partner Bengal Shoe Industry Limited (BSIL) has been facilitating OJT workforce development training programs since December 2010. To date, 860 workers (91 percent female) have completed trainings, of whom 744 (696 women) were awarded full time jobs.

The main focus of this intervention is to develop new people into skilled factory operators. This initiative is a unique intervention as it is creating job opportunities for unemployed local women in the remote Raipur, Laxmipur area.



C. OTHER

C.1. PRICE-Supported Leather SME attends IVLP 2012

In August 2012, PRICE-nominated LTSE group member B.A.G.'s Managing Partner A.K.M. Hedaitul Islam, participated in the U.S. Department of State International Visitor Leadership Program (IVLP) -2012. This program highlighted economic, political, and social factors that influence the development of small businesses, entrepreneurship, and innovation in the U.S. and explored the role of small businesses in driving global economic development, democratization, and stabilization. In Seattle, Washington, he attended a meeting with Washington State Department of Commerce and panel discussions with Seattle's entrepreneurs. He also visited Starline Bus Services, Umpqua Bank, and Boeing.

After completing the program, Mr. Islam stated that he would like to implement the "incubator" concept through the LTSE group, with government and NGO support, to address the needs of local leather sector SMEs.



Picture: Mr. Islam receiving certificate from Ms. Elise Wilson, Program Officer, Office of international Visitors, Bureau of Educational and Cultural Affairs, U.S. Department of State

C.2. Success of a SME Entrepreneur

Ms. Tania Wahab, the Managing Partner of a PRICE-supported SME, Karigar, won the award for Best Women Entrepreneur category under the SME Award 2011. The Federation of Bangladesh Chambers of Commerce and Industry (FBCCI) organized a ceremony for this honor in January 2012. PRICE has been supporting Karigar in developing its workforce, building market linkages, obtaining access to finance, and developing management skills. Ms. Wahab also visited Tripura, India in February 2012 as a member of a business delegation with the Honorable Prime Minister and attended the joint business meeting between Bangladeshi and Indian delegates organized by the Confederation of Indian Industry (CII).



Section IV

Equity Integration

EQUITY INTEGRATION

PRICE has been working to improve women's skills and promote mainstream income generating activities through interventions in horticulture, aquaculture, and leather products. It has done this by working with partner organizations to strengthen gender equity and to increase the involvement of young women by providing them with training and counseling to increase their awareness surrounding female participation in these sectors. The goal of these activities and workshops is to lessen, or remove, hindrances to full integration of females into the workforce and to ultimately create a more competitive business environment.

Women's involvement in the workforce is limited for various reasons. Among them is the lack of educational qualifications, religious perceptions, cultural restrictions, maternal responsibilities, and wage discrimination. However, female employment is quite noticeable in informal sectors. PRICE's gender integration initiatives are designed to empower women by increasing their participation in income generating activities which in turn will have a positive effect on social development.

1. Horticulture

Women play an important role alongside their male counterparts in horticulture production. They lead various supporting activities such as collecting and preserving seeds for the next crop. They also sort, grade, and clean commodities after harvest and prepare the graded products to be sent to the targeted markets. Women's involvement in vegetable production is relatively high and can be up to 50 percent of the workforce. However, in cereal production, women only consist of approximately 11-20 percent of the workforce.

During FY2012, PRICE conducted 1,335 interventions in the horticulture sector which reached a total of 3,949 female farmers. The women received direct trainings designed to increase their knowledge in production technology, proper use of organic fertilizer, vegetable cultivation, and how to utilize contract farming. As a result, these female farmers are now directly involved in vegetable and mango production activities. During this year, a total of 6,588 new jobs were created in the horticulture sector of which 1,720 (26 percent) were secured by women.

2. Aquaculture

Throughout the fish and shrimp value chain, including shrimp processing plants, female participation is traditionally low, near three percent. When women do find work, the employment is largely in menial and casual roles. PRICE's goal is to increase women's participation from the national average of three percent to 20 percent among the 60,000 aquaculture beneficiaries of the project. Price has made remarkable progress working with partners like DESHA, Goldhamary Motshojibi Samabay Somity, Jana Sheba Kendra (JSK), Polli-Bodu Kallan Sanghtha (PBKS), Bathe Shekha, Shushilon and Society for Social Service (SSS) which have mostly women oriented farmers groups. These partner organizations focus mainly on homestead aquaculture to increase their beneficiary farmer's household incomes, and to increase self-employment and personal income generation opportunities.

In FY2012, PRICE facilitated aquaculture sector trainings on productivity, management and workforce development for 30,429 farmers of which 10,391 were female participants (34 percent).

3. Leather Products

The leather industry directly and indirectly employs more than 700,000 people. But women's involvement is mostly present in the lower skilled worker level. This is particularly true in the footwear and leather goods subsectors where approximately 40 percent of workers are women. In contrast, women's involvement in entrepreneurial and managerial levels is extremely low due to their lack of knowledge and skills.

EQUITY INTEGRATION

During this period PRICE facilitated workforce trainings for 3,572 workers, including 2,188 females (nearly 61 percent). Additionally, among the 2,736 new jobs created in the sector, 1,819 (nearly 66 percent) were secured by females.

4. Gender and Integration Training for PRICE Staff

PRICE organized a training session on equity integration from May 29-30, 2012 for PRICE staff members in order to highlight how gender issues relate to the overall goals of the project.

The objectives of the training were:

- To provide a deeper understanding of gender equity integration.
- To introduce gender concepts and issues on the project.
- To identify the role of the project staff to promote gender in the project's programs.
- To increase the understanding of gender in cross-sectoral programmatic linkages.
- To increase the understanding and awareness of workers' rights and the existing policy and legal framework in Bangladesh.
- To sensitize participants to understand clearly how they can link the right perspectives in their existing sectoral interventions.

The training encouraged participants to think critically about gender issues and to determine what measures are needed to reduce gender inequalities.

5. PRICE Visit by USAID Gender Advisor

Ms. Carla Koppell, Gender Advisor, USAID/Washington visited one of PRICE's partners, PICARD Bangladesh Limited, in July 2012. During her visit she was accompanied by USAID/ Bangladesh and PRICE staff and she was able to gain a better understanding of PRICE's leather sector interventions that focus on gender integration. Ms. Koppell met with the management of PICARD Bangladesh Ltd., and discussed the potential growth for leather products with a focus on creating better and more sustainable job opportunities for women. She also visited PICARD's factory to interact with female workers and supervisors.



Picture: Ms. Carla Koppell, Gender Advisor, USAID/Washington visits PICARD Bangladesh Ltd.



Section V

Training Activities

TRAINING ACTIVITIES

PRICE uses training as an instrumental skill development tool to build skills and technical capacity of both individuals and groups. PRICE continued to develop training programs that focused on the promotion of improved technology, business conduct business compliance across supply chain participants, enterprise management, workforce and technical literacy development, and industry adherence to best practices in Bangladesh and international standards when necessary.

Through partner enterprises, PRICE facilitates trainings and provides the technical support by assigning sector specialist consultants to conduct both classroom-based and practical trainings. The trainings follow a participatory approach including brainstorming, question and answer sessions, practical experience sharing, and group work. In addition, PRICE emphasizes gender equity in the trainings to create opportunities for rural women to be involved in income generation activities and enhance their economic empowerment.

In the horticulture, aquaculture, and leather products sectors, PRICE facilitated three types of training activities to strengthen and develop competitiveness of our partners and build upon the capacity of our beneficiaries. The three types of trainings conducted were:

- Workforce development
- Productivity through advanced technology
- Management

In FY2012, PRICE facilitated 2,618 training activities for 63,931 participants in all three sectors. Among the participants, 47,050 were male and 16,881 were female or approximately 26 percent were female. Below is a detailed chart depicting the type and number of trainings that were held with a further a breakdown by gender attendance.

Table 1: Total trainings facilitated by PRICE in FY2012

Types of Training	Total Training Events	Total Participants		
		Male	Female	Total
Workforce Development	120	2,867	3,529	6,396
Productivity / Improved Technologies	1532	44,183	13,352	57,535
Management	735	*24,849	*10,589	*35,438
Awareness Building Programs	231	*296	*82	*378
Grand Total	2,618	47,325	16,528	63,853

*Note: Management trainings and awareness building program participants are selected from the trainees who already received trainings on productivity through advanced technology.

TRAINING ACTIVITIES

The outcomes of the training activities by sector are described below.

1. Horticulture

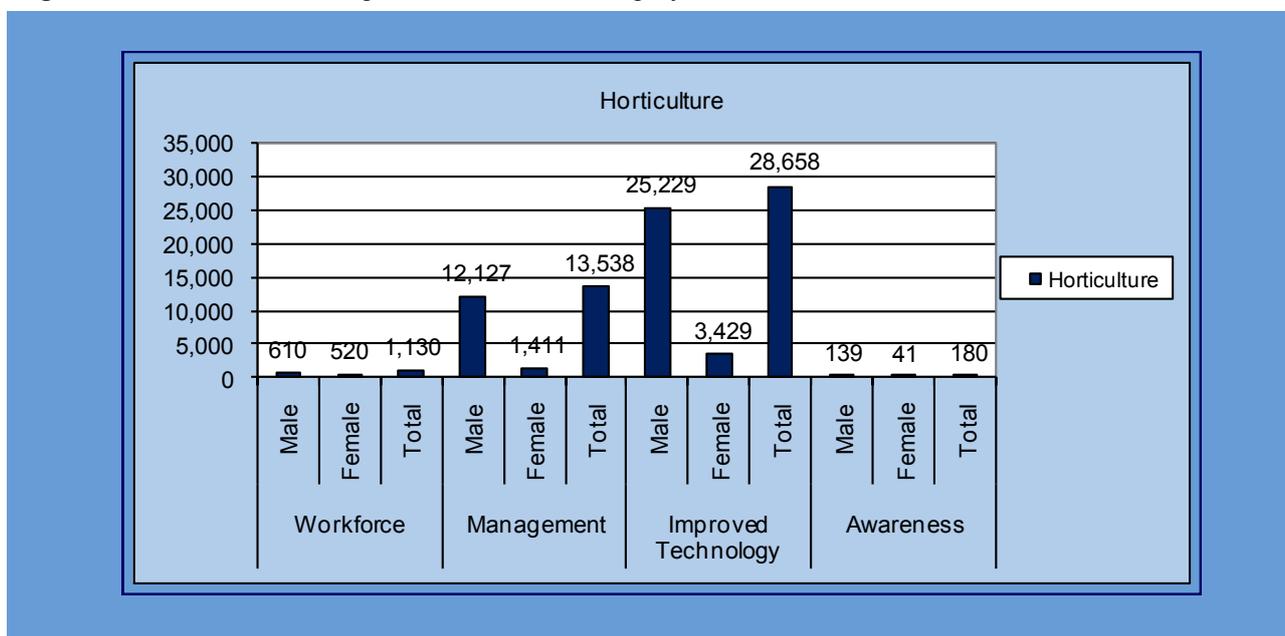
During FY2012, PRICE facilitated 1,335 horticulture related trainings for 30,466 participants of which 26,006 were male and 4,460 were female. Trainings held were on the following topics:

- Modern farming on potato cultivation
- Contract farmers’ training on commercially safe vegetable production and marketing
- Farmers’ training on improved technology for eggplant cultivation through contact farming
- Farmers training on improved mango orchard management
- Contract farming system

Table 1.1: FY2012 Horticulture training by type and number

Types of Training Events	Number of Trainings
Workforce training	37
Improved technologies	955
Management	270
Awareness building program	73
Total	1,335

Figure 1. Horticulture training and intervention category



2. Aquaculture

In FY2012, the PRICE aquaculture sector facilitated a total of 994 fish sector training events for 22,616 participants (13,139 were male and 9,477 were female), and in the shrimp subsector, 235 training events for 7,277 participants (6,521 were male and 756 were female). Below is a table showing the type of training by subsectors fish and shrimp.

TRAINING ACTIVITIES

Table 2.1: FY2012 Aquaculture training by type, number and subsector

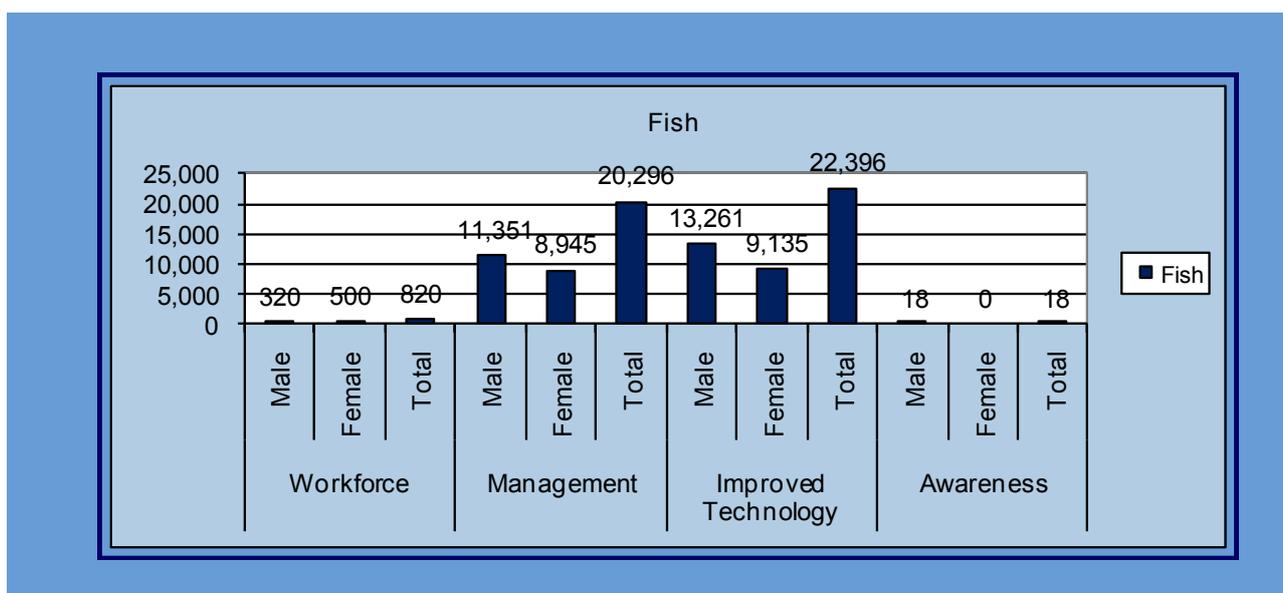
Types of Training Events	Number of Trainings in Fish	Number of Trainings in Shrimp
Workforce training	17	19
Improved technologies	448	126
Management	407	56
Awareness building	122	34
Total	994	235

2. 1. Fish

In fish sub-sector trainings were held on the following topics:

- Improved method of fish farming
- Fish farming management and improved procurement
- Workforce, value addition, and food safety

Figure 2. Fish component training and intervention category in FY2012



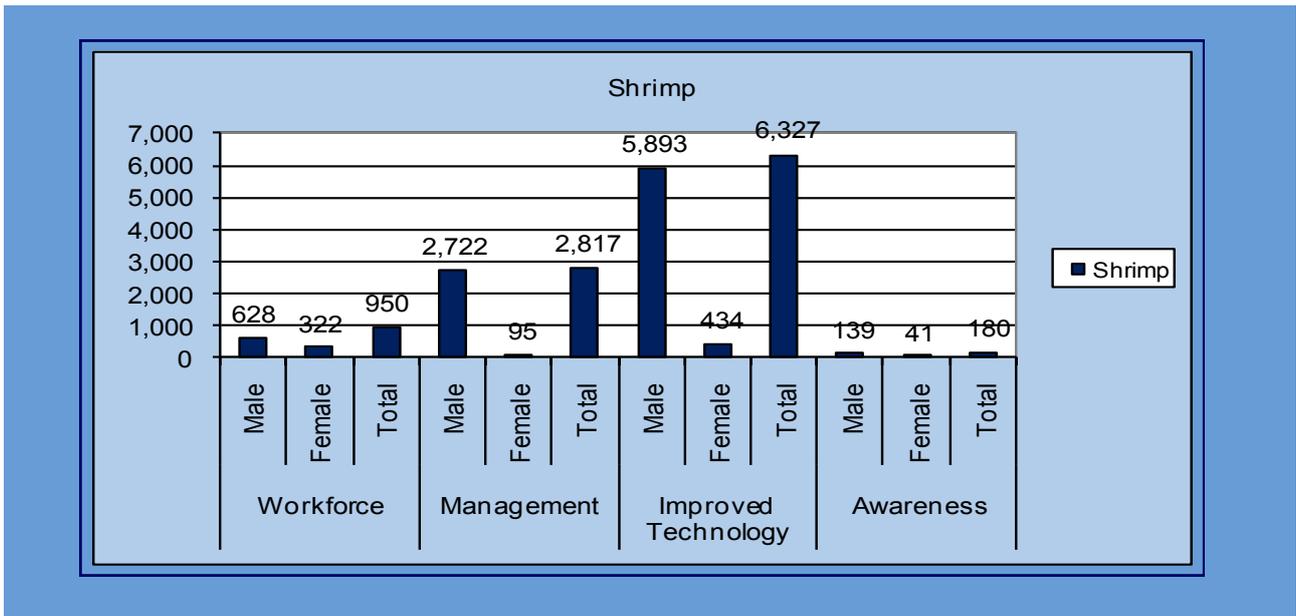
2.2. Shrimp Activities

In the shrimp sub sector, trainings topics are as follows:

- Workforce, value addition, and food safety
- Improved methods of shrimp farming
- Procurement, documentation, and management of shrimp farming

TRAINING ACTIVITIES

Figure 2.2. Shrimp component training and intervention category in FY2012



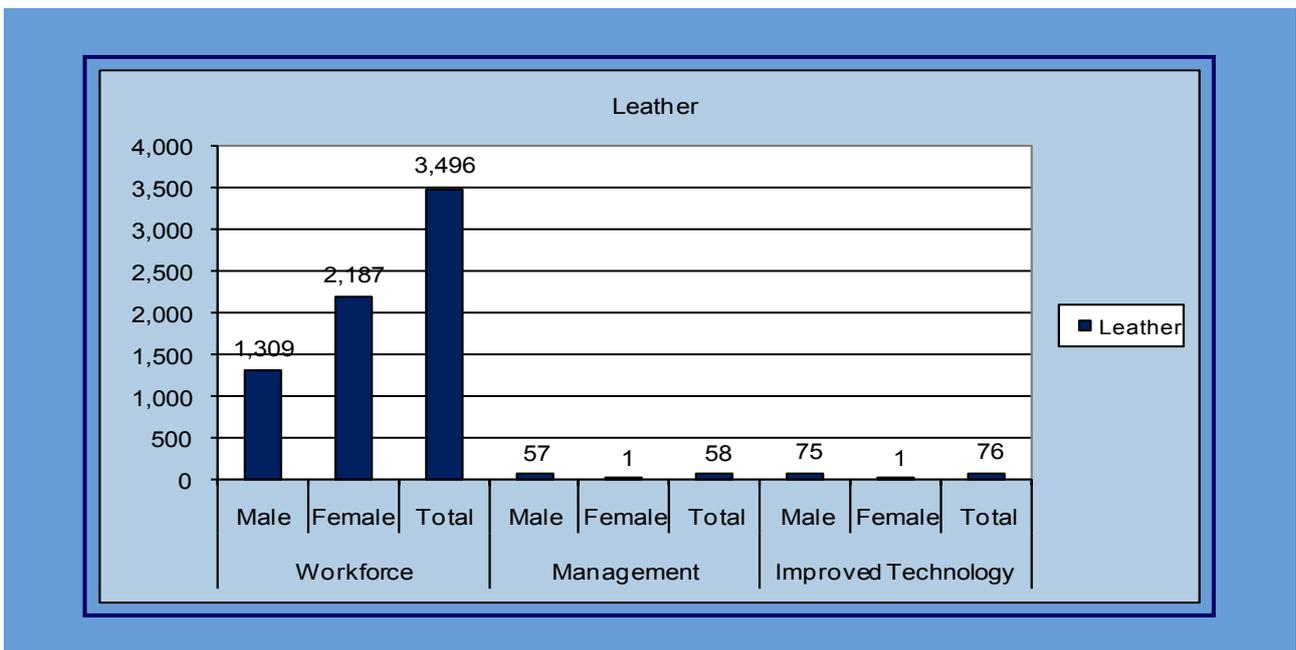
3. Leather Products

In the leather products sector, PRICE facilitated a total of 52 training events for 3,572 participants (1,384 were male and 2,188 were female).

Table 3.1: FY2012 Leather training by type and number

Types of Training Events	Number of Trainings
Workforce training	47
Improved technologies	3
Management	2
Total	52

Figure 3. Leather component training and intervention category in FY2012



TRAINING ACTIVITIES

PRICE Training Program Conclusions

This year, the PRICE training and equity manager introduced a standard ‘training evaluation form’ to obtain direct feedback from participants in all training events across all three sectors. The results from the feedback collected indicate that approximately 85 percent of the trainees were satisfied with the training courses and found them helpful. PRICE consultants and partners have received a number of useful suggestions from the participants to make the program more lively, enjoyable and fruitful. PRICE will use the suggestions as a guide to update and modify future training programs. Training programs are a work in progress and the PRICE training team will continue to improve the trainings based on the trainee’s needs and improvements as indicated in the feedback surveys.

PRICE is in the process of developing an effective follow up mechanism (developed tools) for all administered training courses this year, which we anticipate implementing in 2013.



Picture: Dyke farmers’ training organized by Reniassance at Chitolmari



Section VI

Performance

PRICE PERFORMANCE

Project Targets and Achievements

During FY2012 PRICE focused its activities in the southern part of Bangladesh, covering the 20 Feed the Future (FtF) districts with an emphasis on horticulture.

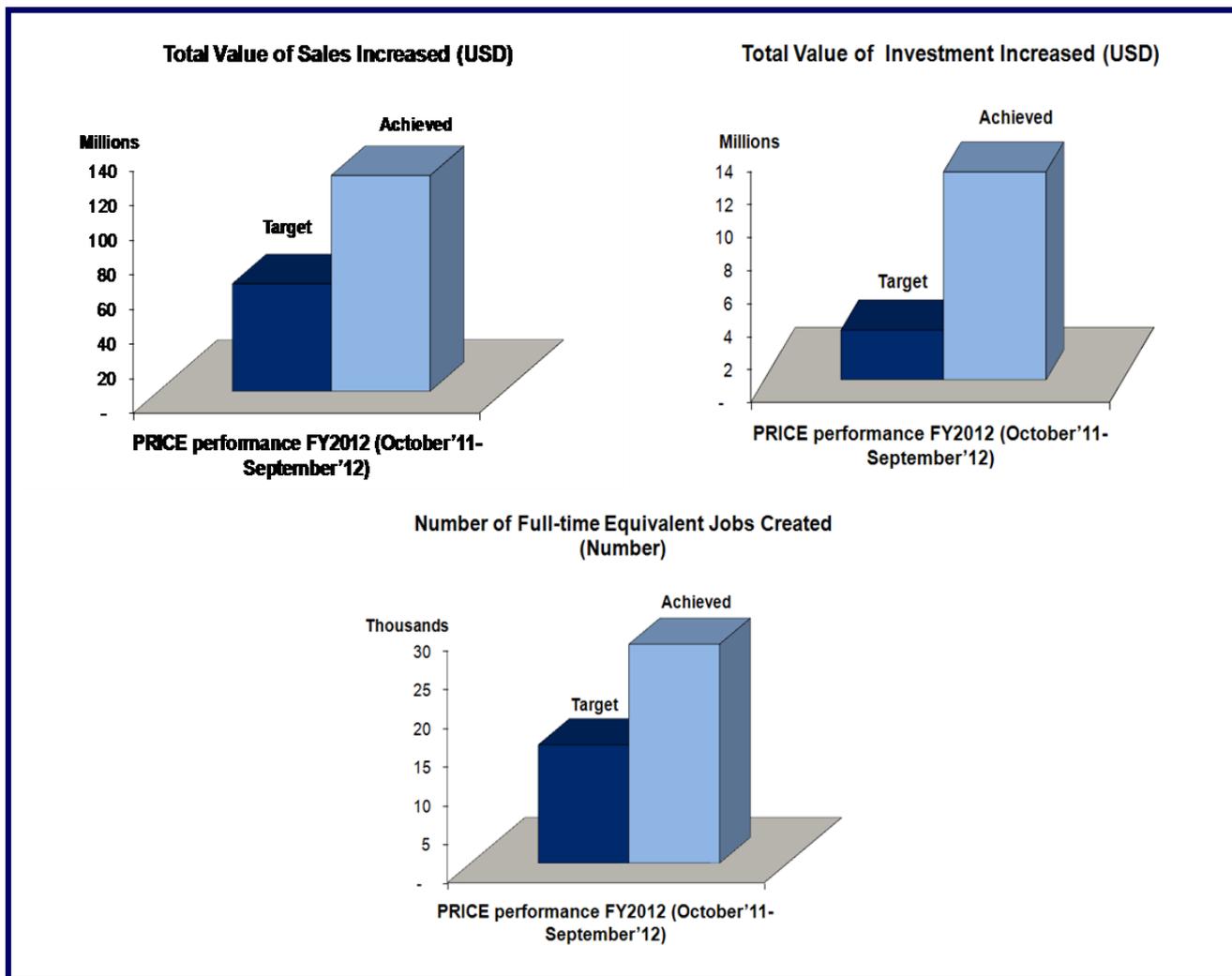
During this reporting period PRICE's partners increased their sales by nearly \$125 million and their investments increased by \$12.6 million across the horticulture, aquaculture, and leather products sectors. In addition, a total of 28,325 new full-time jobs were created through PRICE's interventions.

PRICE's overall performance results and its partner's results can be found in Annex A, Annex B and Annex C.

FY2012 PRICE Performance (October'11-September'12)

INDICATOR	TARGET	ACHIEVED
<i>Sales increased</i>	\$62.3 million	\$124.9 million
<i>New jobs created</i>	15,322	28,325
<i>Investment increased</i>	\$3 million	\$12.6 million
<i>Number of individuals trained in productivity or food security</i>	N/A	57,208
<i>Persons trained in workforce development</i>		6,396

PRICE PERFORMANCE



PMP Updated to Meet FTF Requirements

Following commencement of PRICE interventions within the FtF framework, which targets 20 districts in the south and southwest of Bangladesh, PRICE’s M&E reporting was revised to adhere to the FtF guidelines, specifically:

PRICE activities within the 20 FtF target districts will reach a level of effort of 75 percent, not exceeding 80 percent.

PRICE activities outside the 20 FtF target districts will be revised to a level of effort not exceeding 20 to 25 percent.

PRICE project achievement reporting will combine findings from 1 and 2.

USAID and PRICE had several meetings to discuss the definitions of FTF indicators, which of those match with PRICE’s existing indicators, which indicators PRICE should continue to report on etc. It was agreed that PRICE should select the set of FTF indicators for reporting which are possible to report on without incurring any additional expenses on data collection like surveys etc. Then PRICE may continue to report on other standard as well as custom indicators which PRICE has been reporting on. The PMP will be updated to include the list of all these indicators: FTF or Standard, PRICE contractual obligations and other custom. The previous set of 7 PRICE indicators will be replaced by this new set. Targets should be set for the rest of the period for these indicators in the PMP. After a meeting in June 2012, eleven indicators under the two categories were approved for reporting.



Section VII

Communications

COMMUNICATIONS

Effective communications are essential in project management. PRICE strives to share its sense of purpose, progress, and knowledge with its target audience through strategic and effective communication. PRICE's target audience includes USAID, private sector partners, public sector partners, donors and donor funded projects, and the general public. For effective communication PRICE utilizes success stories, weekly updates, annual events, progress reports, quarterly newsletters, photographs, and print publications. Some of PRICE's communication activities during FY2012 have been highlighted below.

1. America Week 2012

PRICE participated in America Week 2012 held in Chittagong from January 30, 2012 to February 1, 2012. For this event, new promotional materials were developed and distributed to the visitors. These materials included a project brief, sector briefs, success stories, newsletters, three new flyers on horticulture, and one flyer on the leather sector. PRICE showcased the activities of the three sectors, which included demonstrations on making leather products, fish farming, dykes, tissue culture, and potato varieties. Overall, PRICE received a very positive response from the visitors.

The U.S. Ambassador to Bangladesh and the USAID/B Mission Director visited the PRICE stall and showed interest in the project's activities, particularly in the live demonstrations.



Picture: The U.S. Ambassador to Bangladesh visit to PRICE stall in America Week 2012

2. Publications

Information Bulletin: The PRICE project brief and sector briefs were updated and published at the beginning of this year. These updated informational bulletins were distributed to more than 1,200 people who visited PRICE's stall during America Week. Moreover, three additional flyers were published in January 2012 on eggplant, potato, and tomato production technology.

Newsletter: PRICE produces newsletters which reaches a wide audience including PRICE's partners and beneficiaries. Every newsletter covers highlights from each sector and includes a feature story that focuses on at least one of PRICE's partners. In total, PRICE published three new issues this year.

Success Stories: Success stories are the primary tool for sharing project impact. During FY2012 a total of 11 success stories and case studies have been published and the project is proud to have had one success story highlighted in the Feed the Future newsletter and another published in USAID's FrontLine newsletter. Three case studies and one success story can be found in Annex D.

Photography: PRICE regularly documents its project's activities through photography. During this year, PRICE participated in USAID's 50th anniversary photo exhibition and Feed the Future photo contest. PRICE won the third prize in the Feed the Future photo contest.

3. Initiative for Increasing Visibility

This year PRICE took several initiatives to increase the project's visibility. The PRICE communications team worked with its beneficiaries and partners to developed clear guidelines for branding all communication materials including signboards, promotional material, and print publications under the guidance of USAID's communications team. Also, PRICE ensured its visibility through different events such as participating in National Fish Week 2012, trainings, workshops, and awareness raising initiatives. PRICE plans to continue working towards increasing its visibility in the upcoming extension period.



Picture: PRICE won the third prize in the FTF photo contest.

Annex A

FY 2012 (OCT'11-SEP'12) AND ACCUMULATED RESULT

Standard Indicators

FTF Ref.	Indicator & Disaggregation	Unit	Achievement FY2012 (Oct'11-Sep '12)
4.5.2 -23	Value of incremental sales (collected at farm-level) attributed to FTF implementation	USD	64,240,241
	Aquaculture		40,672,041
	_Fish		38,027,619
	_Shrimp		2,644,423
	Horticulture		23,568,200
	_Potato and vegetables		19,454,437
	_Cross-cutting horticulture		4,113,763
4.5.2-38	Value of new private sector investment in the agriculture sector or food chain leveraged by FTF implementation	USD	12,415,721
	Aquaculture		12,176,274
	Horticulture		239,447
4.5.2-7	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	Number	57,208
	Male		44,526
	Female		12,682
4.5.2-5	Number of farmers and others who have applied new technologies or management practices as a result of USG assistance	Number	15,743
	New		15,743
	Continuing		0
	Male		11,668
	Female		4,076
4.5.2 - 2	Number of hectares under improved technologies or management practices as a result of USG assistance	Number	5,310
	New		5,310
	Continuing		0
	Male		4,352
	Female		958

FY 2012 (OCT'11-SEP'12) AND ACCUMULATED RESULT

Custom Indicators

Type	Indicator & Dis-aggregation	Unit	LoP Target - Contractual	Achievement till Sep'12 & Target (Oct'12-Dec'13)	FY2012 (Oct'11-Sep'12) Performance			Accumulated Achievement till Sep'12		
					Annual Projection	Achievement	% of Achievement	Cumulative planned	Cumulative achieved	% of Achievement of LoP Projection
Custom	Total Value of Sales Increased	USD	200,000,000	366,387,601	62,299,017	124,885,117	200%	178,849,717	306,102,412	84%
	Domestic		116,994,617	232,383,305	34,349,369	81,266,825	237%	90,279,439	206,325,703	89%
	Export		316,994,617	134,004,296	27,949,648	43,618,291	156%	88,570,278	99,776,709	74%
	Aquaculture		105,000,000	198,792,236	26,181,337	52,531,384	201%	93,306,337	185,792,236	93%
	Horticulture		40,000,000	69,405,244	13,051,243	36,096,309	277%	32,801,243	55,380,244	80%
	Leather/Leather products		55,000,000	98,190,122	23,066,436	36,257,424	157%	52,742,136	64,929,933	66%
Custom	Number of Full-time equivalent Jobs Created	Number	40,000	67,274	15,322	28,325	185%	42,822	59,304	88%
	Aquaculture		26,000	43,245	10,908	19,001	174%	28,658	40,045	93%
	Horticulture		10,500	16,657	3,534	6,588	186%	10,534	12,757	77%
	Leather/Leather products		3,500	7,372	880	2,736	311%	3,630	6,502	88%
	Male		34,383	53,537	13,708	24,524	179%	34,756	47,951	90%
	Female		5,617	13,738	1,614	3,801	236%	8,066	11,354	83%
Custom	Total Value of Investment In-created	USD	4,000,000	20,992,917	3,022,346	12,595,841	417%	5,922,346	18,982,917	90%
	Aquaculture		2,100,000	18,437,841	2,604,828	12,176,274	467%	3,904,828	17,137,841	93%
	Horticulture		1,000,000	1,368,748	217,519	239,447	110%	937,519	908,748	66%
	Leather/Leather products		900,000	1,186,328	200,000	180,120	90%	1,080,000	936,328	79%
Custom	Number of persons participated in WF-dev prog	Number		28,400	4,840	6,396	132%	18,340	18,900	67%
	Aquaculture			7,969	770	1,770	230%	4,527	6,969	87%
	Horticulture			8,196	870	1,130	130%	3,300	2,496	30%
	Leather/Leather products			12,235	3,200	3,496	109%	10,514	9,435	77%
	Male			11,743	2,722	2,867	105%	11,382	7,553	64%
	Female			16,658	2,118	3,529	167%	6,958	11,348	68%

FY 2012 (OCT'11-SEP'12) AND ACCUMULATED RESULT

Custom Indicators

Type	Indicator & Dis-aggregation	Unit	LoP Target - Contractual	Achievement till Sep'12 & Target (Oct'12-Dec'13)	FY2012 (Oct'11-Sep'12) Performance		Accumulated Achievement till Sep'12		% of Achievement of LoP Projection	
					Annual Projection	Achievement	% of Achievement	Cumulative planned		Cumulative achieved
Custom	Number of Firms and farmers receiving USG assistance to access formal loan or micro-credit	Number		32,677	758	6,553	865%	3,558	13,137	40%
	Aquaculture			4,171	750	791	105%	2,753	3,631	87%
	Horticulture			28,478	0	5,741		783	9,478	33%
	Leather/Leather products			28	8	21	263%	21	28	100%
	Male			27,843	379	5,102	1346%	1,879	9,523	34%
	Female			4,834	379	1,451	383%	1,679	3,614	75%
Custom	Total value of sales increased of USG assisted businesses	USD								
	Aquaculture					24,387,451				
	_Fish					11,859,342				
	_Shrimp					6,150,502				
	Horticulture					5,708,840				
	_Potato and vegetables					12,528,109				
	_Cross-cutting horticulture					9,801,524				
						2,726,584				

Annex B

FTFMS AND PPR FY12 REPORT

Standard Indicators

Indicator No.	Indicator title	Unit	Disaggregated by:	Baseline		FY12 Target	Achieved to end of FY12		FY13 Target	FY14 (Oct-Dec '13) Target
				Year	Value		FTF Zone	Non-FTF Zone		
4.5.2-23	Value of incremental sales at farm level attributed to FtF implementation	US \$ mill.	Fish and shrimp	2011	79,320,356		10,097,135	30,574,906	9,600,000	800,000
				2011	9,161,599		7,814,158	15,754,042	10,125,000	1,500,000
				2011	88,481,955		17,911,294	46,328,948	19,725,000	2,300,000
4.5.2-38	Value of new private sector investment in the agriculture sector or food chain leveraged by FtF implementation	US \$ mill.	None							
					0		10,175,434	2,240,287	1,660,000	100,000
4.5.2-2	Number of hectares under improved technologies or management practices as a result of USG assistance	Hectares	New		0		3,183	2,127	2,050	0
				Continuing	0	0	0	5,310	7,360	
					Male	0	2,418	1,934	4,352	6,020
						Female	0	765	193	958
					Total		0	40,564	3,183	2,127
4.5.2-5	Number of farmers and others who have applied new technologies or management practices as a result of USG assistance	Number	Continuing		0		12,278	3,465	9,220	0
				Male	0	0	0	0	15,740	24,960
					Female	0	9,088	2,580	11,668	19,220
						Total	0	3,191	885	4,076
					Total		0	39,600	12,278	3,465
4.5.2-7	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	Number	Male		0		30,786	13,740	25,950	0
				Female	0	10,074	2,608	12,682	5,550	
					Producers	0	40,380	15,768	56,148	30,750
						People in government	0	0	190	190
					People in private sector firms		0	480	390	870
Total	0	52,800	40,860	16,348		57,208	31,500	0		

FTFMS AND PPR FY12 REPORT

Custom Indicators

Indicator No.	Indicator title	Unit	Disaggregated by:	Baseline		FY12 Target	Achieved to end of FY12			FY13 Target	FY14 (Oct-Dec '13) Target
				Year	Value		FTF Zone	Non-FTF Zone	Total		
Custom	Total Value of Sales Increased	US \$ mill.	Domestic	2011	101,831,571	34,349,369	23,115,214	58,151,611	81,266,825	23,099,250	2,958,350
			Export	2011	81,866,821	27,949,648	6,604,774	37,013,518	43,618,291	28,351,100	5,876,500
			Aquaculture	2011	170,903,146	26,181,337	17,915,674	34,615,710	52,531,384	12,000,000	1,000,000
			Horticulture	2011	12,795,246	13,051,243	11,804,315	24,291,994	36,096,309	12,025,000	2,000,000
			Leather/Leather products	2011	0	23,066,436	0	36,257,424	36,257,424	27,425,350	5,834,850
			Total	2011	183,698,392	62,299,017	29,719,988	95,165,128	124,885,117	51,450,350	8,834,850
Custom	Number of Full-time equivalent Jobs Created	Number	Aquaculture		0	10,908	14,016	4,985	19,001	2,900	300
			Horticulture		0	3,534	1,475	5,113	6,588	2,900	1,000
			Leather/Leather products		0	880	0	2,736	2,736	870	0
			Male		0	13,708	15,270	9,254	24,524	4,610	975
			Female		0	1,614	221	3,580	3,801	2,060	325
			Total		0	15,322	15,491	12,834	28,325	6,670	1,300
Custom	Total Value of Investment Increased	US \$ mill.	Aquaculture		0	2,604,828	10,025,298	2,150,976	12,176,274	1,300,000	0
			Horticulture		0	217,519	150,136	89,311	239,447	360,000	100,000
			Leather/Leather products		0	200,000	0	180,120	180,120	250,000	0
			Total		0	3,022,346	10,175,434	2,420,407	12,595,841	1,910,000	100,000
			Aquaculture		0	770	850	920	1,770	1,000	0
			Horticulture		0	870	420	710	1,130	5,700	0
Custom	Number of persons participated in WF-dev prog	Number	Leather/Leather products		0	3,200	0	3,496	3,496	2,800	0
			Male		0	2,722	770	2,097	2,867	4,200	0
			Female		0	2,118	500	3,029	3,529	5,300	0
			Total		0	4,840	1,270	5,126	6,396	9,500	0

FTFMS AND PPR FY12 REPORT

Custom Indicators

Indicator No.	Indicator title	Unit	Disaggregated by:	Baseline		FY12 Target	Achieved to end of FY12			FY13 Target	FY14 (Oct-Dec '13) Target	
				Year	Value		FTF Zone	Non-FTF Zone	Total			
Custom	Number of firms and farmers receiving USG assistance to access formal loan or micro-credit	Number	Aquaculture		0	750	0	791	791	500	0	
			Horticulture		0	0	2,160	3,581	5,741	15,000	4,000	
			Leather/Leather products		0	8	0	0	21	21	0	0
			Male		0	379	1,185	3,917	5,102	14,500	3,800	
			Female		0	379	975	476	1,451	1,000	200	
			Total		0	758	2,160	4,393	6,553	15,500	4,000	
Custom	Total value of sales increased of USG assisted businesses	US \$ mill.	Aquaculture	2011	91,582,790		7,818,539	4,040,804	11,859,342	2,400,000	200,000	
			Horticulture	2011	3,633,647		3,990,156	8,537,952	12,528,109	1,900,000	500,000	
			Total	2011	95,216,437		11,808,695	12,578,756	24,387,451	4,300,000	700,000	

Annex C

PARTNER RESULTS : HORTICULTURE

Region	Product	Partner	Sales Increased (USD)			No. of Total Jobs Created*			Investment Increase (USD)
			Domestic	Export	Total	Male	Female	Total	
Bogra - Rajshahi	Potato	Gram Unnayan Karma Enterprise Development (GUKED)-1	1,251,625	0	1,251,625	344	165	508	0
		Gram Unnayan Karma Enterprise Development (GUKED)-2	1,355,294	0	1,355,294	994	509	1,503	0
		Gram Unnayan Karma Enterprise Development (GUKED)-1 Farmers	884,838	0	884,838	205	176	382	5,921
		Murail Rural Development Multipurpose Cooperative Society Ltd	113,099	0	113,099	44	20	64	0
		Murail Rural Development Multipurpose Cooperative Society Ltd-2	104,719	0	104,719	10	-6	4	0
		Seed Potato Growers' Cooperative Society Ltd.	3,764,063	0	3,764,063	373	64	437	2,354
		Rural Development Academy (RDA)	10,734	0	10,734	1	0	1	0
		Ankur Seed and Himagar	33,722	0	33,722	23	0	23	0
		Ferdous Biotech Ltd	134,842	0	134,842	32	13	45	0
		Sajeeb Seeds	40,837	0	40,837	14	6	20	0
		Unique Seeds	49,012	0	49,012	6	5	11	0
		Technology For Rural Development (TFRD)	104,276	0	104,276	144	70	215	32,210
	Cross-Cutting	Grameen Krishak Sohayak Sangstha Enterprise (GKSSE)	262,734	0	262,734	85	8	93	24,380
		Grameen Krishak Sohayak Sangstha Enterprise (GKSSE)- Farmers	4,113,763	0	4,113,763	731	231	961	11,027
		Riya Fertilizer	169,054	0	169,054	37	3	41	2,995
		Blue Moon International	917,616	0	917,616	6	0	6	0

PARTNER RESULTS : HORTICULTURE

Region	Product	Partner	Sales Increased (USD)			No. of Total Jobs Created*			Investment Increased (USD)
			Domestic	Export	Total	Male	Female	Total	
Bogra-Rajshahi	Mango	Kansat Mango Farmer Multipurpose Co-operative Society Limited	3,479,904	0	3,479,904	60	10	70	3,535
		Kansat Mango Farmer Multipurpose Co-operative Society Limited- Mango Stands in Dhaka	95,732	0	95,732	8	0	8	0
		Bonolota Mango Producer Cooperative Society Ltd	1,106,031	0	1,106,031	95	0	95	1,029
		Bonolota Mango Producer Cooperative Society Ltd- Mango Stands in Dhaka	1,159	0	1,159	-1	0	-1	0
Jessore-Khulna	Potato	Konika Seed Company Ltd	357,496	0	357,496	6	11	17	15,307
		Muktir Alo Agro Business-(Potato)	6,979	0	6,979	2	1	3	0
		Pride Agro Enterprise-(Potato)	79,725	0	79,725	43	23	66	4,940
		Krishak Bandhu Karmashuchi-(Potato)	183,714	0	183,714	46	24	70	973
		Golden Seed Processing Farm	20,506	0	20,506	1	0	1	0
		Krishak Bandhu Karmashuchi - Potato Farmers	624,789	0	624,789	51	16	68	2,083
		Pride Agro Enterprise-Potato Farmers	369,429	0	369,429	120	-41	79	6,606
		Shushilon-Potato Farmers	45,884	0	45,884	1	0	1	812
		Rural Reconstruction Foundation-Potato Farmers	539,629	0	539,629	74	-0	74	13,213
		Proshikkhito Jubo Kalyan Agro Enterprise-Potato Farmers	220,152	0	220,152	-27	10	-17	2,615
		Jagoroni Agro Industries-Potato Farmers	292,197	0	292,197	-16	0	-15	1,922
		Dipti Agro Enterprise-Potato Farmers	497,542	0	497,542	136	34	170	12,532

PARTNER RESULTS : HORTICULTURE

Region	Product	Partner	Sales Increased (USD)			No. of Total Jobs Created*			Investment Increased (USD)
			Domestic	Export	Total	Male	Female	Total	
Jessore-Khulina	Egg-plant	Muktir Alo Agro Business-(Eggplant)	1,554	0	1,554	0	0	0	0
		Pride Agro Enterprise-(Eggplant)	415,789	0	415,789	25	10	35	330
		Krishak Bandhu Karmashuchi-(Eggplant)	106,013	0	106,013	2	0	2	0
		Krishak Bandhu Karmashuchi-Eggplant Farmers	-50,821	0	-50,821	-85	-12	-97	1,569
		Society Development Community (SDC)	299,870	0	299,870	29	-12	17	4,261
		Pride Agro Enterprise-Eggplant Farmers	1,421,212	0	1,421,212	285	0	285	9,997
		Polly Prokrity-Eggplant Farmers	79,566	0	79,566	24	2	26	494
	Mango	Uttaran Agro Enterprise	0	0	0	-2	0	-2	287
		Chesta Agro Enterprise	703,034	0	703,034	168	0	168	1,396
		ANKUR-Farmers	482,972	0	482,972	67	3	70	442
		Uttaran Agro Enterprise - Farmers	100,415	0	100,415	-0	-1	-1	592
		Adorsho Foundation	23,151	0	23,151	3	0	4	2,098
		Chesta Agro Enterprise-Farmers	917,987	0	917,987	50	0	51	6,294
	Cross-Cutting	Padma Seeds	467,055	0	467,055	17	7	24	10,781
		Biotech	64,922	0	64,922	4	2	5	0
		Lalteer Seed Limited-2	198,780	0	198,780	2	3	6	0

PARTNER RESULTS : HORTICULTURE

Region	Product	Partner	Sales Increased (USD)			No. of Total Jobs Created*			Investment Increase (USD)
			Domestic	Export	Total	Male	Female	Total	
Jessore-Khulna	Vegetable	EFADF Agro Business	1,009,266	0	1,009,266	177	18	194	1,797
		EFADF Agro Business-Vegetables Farmers	374,557	0	374,557	12	3	15	3,727
		Renaissance	286,250	0	286,250	-41	6	-35	305
		Renaissance Vegetable Farmers	868,560	0	868,560	121	16	138	30,198
		Polly Prokrity-Chilli Farmers	79,565	0	79,565	15	4	19	362
		Dipti Agro Enterprise-Onion Farmers	9,295	0	9,295	10	2	12	1,279
		Shushilon-Watermelon Farmers	557,082	0	557,082	-39	45	6	10,888
		Shushilon-Cucumber Farmers	84,275	0	84,275	-3	3	-1	2,036
		Pride Agro Enterprise-(Vegetable)	65,923	0	65,923	13	5	18	0
Dhaka	P	Golden Harvest Agro Industries Limited	3,072,500	174,578	3,247,078	12	10	23	0
	C	Laltee Seed Limited	646,423	0	646,423	4	-5	-1	0
Total Horticulture			35,921,731	174,578	36,096,309	4,868	1,720	6,588	239,447

* Direct job information is complemented using a statistical model to estimate associated job creation across the value chain.

Source of data: Partner interviews for enterprises and sample surveys for farmer groups.

PARTNER RESULTS : AQUACULTURE (FISH)

Region	Partner	Sales Increased (USD)			No. Total Jobs Created*			Investment Increased (USD)
		Domestic	Export	Total	Male	Female	Total	
Mymensingh - Jamalpur	Digherkanda Matsopona Beboshahi-Kallan Bohumukhi Somabaya Somity (DMBBS)	810,866	0	810,866	101	2	103	7,297
	Phulpur Fish and Prawn Farmers' Association (PFPPA)	420,298	0	420,298	56	0	56	12,643
	Phulpur Fish and Prawn Farmers' Association (PFPPA)-2	1,912,185	0	1,912,185	245	32	277	4,977
	Trisal Fish Farmers' Business Somity (TFFS)-1	2,755,395	0	2,755,395	-484	1	-483	23,415
	Trisal Fish Farmers' Business Somity (TFFS)-2	4,457,673	0	4,457,673	161	0	161	47,896
	Nokla Motsojibi Somity	126,301	0	126,301	437	147	584	10,161
	Bamunji Beel Motsojibi Somity	80,254	0	80,254	200	23	222	7,767
	Muktaghacha Fish Farming and Business Association	-273,985	0	-273,985	526	0	526	96,425
	Unnayan Sangha	1,098,530	0	1,098,530	115	0	115	3,449
	Tarakanda Satata Motso Beboshahi Somity	1,016,039	0	1,016,039	235	4	240	32,596
	Bhaluka Motso Chasi Somoboy Somity	5,876,460	0	5,876,460	-125	-79	-204	267,883
Bogra - Rajshahi	Trinamool Manobik Unnayan Shongstha (TMUS)-1	411,572	0	411,572	210	5	215	2,593
	Trinamool Manobik Unnayan Shongstha (TMUS)-2	1,195,140	0	1,195,140	-876	0	-876	519,627
	Chitralatha Aqua Park Ltd	20,112	0	20,112	10	0	10	3,267
	Kahaloo Matshya Chashi Samoby Samity-1	980,644	0	980,644	673	23	696	22,619
	Kahaloo Matshya Chashi Samoby Samity-2	189,568	0	189,568	67	14	81	8,494
	Pachpir Bazar Matsya Chashi Samoby Samity-1	220,876	0	220,876	95	0	95	3,007
	Pachpir Bazar Matsya Chashi Samoby Samity-2	49,917	0	49,917	3	2	5	1,020
	Murail Matsya Chashi Samoby Samity-1	182,723	0	182,723	92	0	92	5,194
	Murail Matsya Chashi Samoby Samity-2	301,150	0	301,150	76	3	79	7,744
	Society for Sustainable Development for the Rural & Urban Area (SSURDA)	1,205,574	0	1,205,574	469	0	469	50,838
	Talora Ancholik Matsa Chasi Somobay Somity	622,062	0	622,062	185	-11	174	9,212
	Sherpur Matsa Chasi Somoboya Somity	808,314	0	808,314	760	38	798	22,928
	Kahaloo Matshya Pona Utpadankari Somoby Somity	846,279	0	846,279	202	-2	201	48,872
	Adamdighi Khudra Motso Beboshahi Somity	505,145	0	505,145	-4	-4	-8	12,980

PARTNER RESULTS : AQUACULTURE (FISH)

Region	Partner	Sales Increased (USD)			No. Total Jobs Created*			Investment Increased (USD)
		Domestic	Export	Total	Male	Female	Total	
Bogra-Rajshahi	North Bengal Thaitech Tilapia Hatchery	68,425	0	68,425	2	0	3	1,471
	Agriculture Advisory Society (AAS)-(Aqua)	2,097,488	0	2,097,488	839	-0	839	150,981
	Palli Bandhu Kallan Sangstha	322,399	0	322,399	149	0	149	9,663
	Chitralatha Aqua Park Ltd-Farmers	89,453	0	89,453	-56	-2	-59	2,365
	North Bengal Thaitech Tilapia Hatchery- Farmers	123,416	0	123,416	-71	0	-71	3,420
Barishal	Rakhaing Development Foundation (RDF)- 1	237,641	0	237,641	38	0	38	13,226
	Rakhaing Development Foundation (RDF)- 2	-446,251	0	-446,251	-262	0	-262	73,371
	Barisal Aquaculture Development Society	761,735	0	761,735	-157	28	-129	53,398
	Center for Integrated Social Development (CISD)	54,323	0	54,323	-86	-9	-95	5,221
Comilla-Noakhali	Society For Social Services (SSS)-1	209,111	0	209,111	-85	0	-85	23,187
	Society For Social Services (SSS)-2	952,171	0	952,171	108	1	109	452,337
	Janaseba Kendra (JSK)- 1	54,654	0	54,654	3	0	3	3,419
	Janaseba Kendra (JSK)- 2	123,866	0	123,866	30	0	30	4,234
	Janaseba Kendra (JSK)- 3	217,630	0	217,630	93	0	93	19,492
	Bangladesh Cage Culture Owners Association (BCOA)	217,014	0	217,014	91	0	91	29,135
Cox's Bazar	Allahwalla Hatchery & Farming Complex	189,640	0	189,640	49	0	49	13,412
	Samridhi Bohumukhi Matsya Unnayan Gobesana Kendra	16,783	0	16,783	9	0	9	13,250
	Niribili Telapia Hatchery	14,144	0	14,144	-203	0	-203	3,659
	Niribili Telapia Hatchery-Farmers	332,025	0	332,025	15	0	15	24,714
	Allahwalla Hatchery & Farming Complex - Farmers	103,769	0	103,769	79	0	79	25,070
	Samridhi Bohumukhi Matsya Unnayan Gobesana Kendra -Farmers	139,486	0	139,486	83	0	83	19,596

PARTNER RESULTS : AQUACULTURE (FISH)

Region	Partner	Sales Increased (USD)			No. Total Jobs Created*			Investment Increased (USD)
		Domestic	Export	Total	Male	Female	Total	
Jessore-Khulna	Mulia Matshyajibi Samittee	527,674	0	527,674	239	21	260	12,446
	Goldhamari Motshojibi Samabay Somity	185,747	0	185,747	129	9	138	18,435
	South Bay (Pvt) Ltd	56,820	0	56,820	6	0	6	1,625
	Nowapara Fisheries Complex	-28,124	0	-28,124	-6	-1	-7	5,696
	Ma Fatema Fish Hatchery	79,598	0	79,598	23	1	23	0
	Pori Matshya Hatchery	-10,852	0	-10,852	4	0	4	6,773
	Rupali Fish Hatchery	29,059	0	29,059	8	0	8	4,940
	Shuvra Matshya Hatchery	118,018	0	118,018	-17	0	-17	0
	Deesha Samaj Kolyan Sangstha	152,469	0	152,469	11	0	11	1,930
	Din Bijoy Enterprise-(Fish)	35,122	0	35,122	10	0	10	146
	Vairob Fish Agency-(Fish)	204,303	0	204,303	0	0	0	0
	Razu Enterprise-(Fish)	64,455	0	64,455	0	0	0	0
	Modina Matshya Prokolpo-(Fish)	9,975	0	9,975	0	0	0	0
	Mondal Fish- (Fish)	38,400	0	38,400	0	0	0	0
	Satata Fish- (Fish)	144,691	0	144,691	0	0	0	0
	Satkhira Feed Industries Ltd.-(Fish)	1,481,037	0	1,481,037	19	5	24	0
	South Bay (Pvt) Ltd-Farmers	668,295	0	668,295	-134	5	-129	12,963
	Nowapara Fisheries Complex-Farmers	780,916	0	780,916	264	8	273	23,575
	Ma Fatema Fish Hatchery-Farmers	536,067	0	536,067	186	-1	185	12,098
	Pori Matshya Hatchery-Farmers	788,377	0	788,377	145	2	147	22,087
	Rupali Fish Hatchery-Farmers	517,917	0	517,917	65	-1	64	5,634
	Shuvra Matshya Hatchery-Farmers	1,563,910	0	1,563,910	14	-0	14	4,839
	Trinomooll Krishi Unnayan Shomoby Shamittee Ltd.-Farmers	967,308	0	967,308	60	-0	60	11,336
	Chittra Unnayan Kendra-Farmers	36,636	0	36,636	12	22	34	4,935
	Batche Shekha	61,907	0	61,907	31	0	32	2,230
	Shushilan (Aqua)-Farmers	58,043	0	58,043	32	29	61	9,900
Dhaka	Golden Harvest Sea Food & Fish Processing Limited	0	720,299	720,299	16	17	33	44,304
	Fishtech (BD) Limited	389,953	0	389,953	1	0	1	3,608
	SMS Feeds Ltd.	2,302,089	0	2,302,089	178	12	189	70,760
Total Fish		43,457,821	720,299	44,178,121	5,393	343	5,737	2,457,780

*Direct job information is complemented using a statistical model to estimate associated job creation across the value chain.

Source of data: Partner interviews for enterprises and sample surveys for farmer groups.

PARTNER RESULTS : AQUACULTURE (SHRIMP)

Region	Partner	Sales Increased (USD)			No. Total Jobs Created*			Investment Increased (USD)
		Domestic	Export	Total	Male	Female	Total	
Jessore-Khulna	Gazi Fish Culture Ltd	29,772	341,244	371,016	75	46	121	41,836
	Din Bijoy Enterprise-(Shrimp)	20,570	80,872	101,442	10	3	13	588
	Vairob Fish Agency-(Shrimp)	247,150	160,796	407,947	7	7	15	827
	Razu Enterprise-(Shrimp)	72,643	127,219	199,862	2	4	5	159
	Modina Matshya Prokolpo-(Shrimp)	49,367	14,147	63,515	5	4	9	3,373
	Mondal Fish-(Shrimp)	38,382	77,685	116,066	3	4	7	104
	Satata Fish- (Shrimp)	114,142	549,291	663,434	8	27	35	73
	Satkhira Feed Industries Ltd.-(Shrimp)	408,909	0	408,909	0	0	0	0
	GHERS by The WorldFish Center	581,456	1,585,515	2,166,971	13,181	-418	12,763	9,616,352
	Rupali Sea Foods Ltd	0	-97,004	-97,004	-36	-2	-37	54,878
	Organic Shrimp Export Ltd	0	396,800	396,800	-13	-35	-48	0
	Jahanabad Frozen Foods Ltd	0	495,862	495,862	51	126	177	0
	Jalalabad Frozen Sea Foods Ltd	0	337,893	337,893	54	128	182	0
	Mofa Fish Processing Pvt Ltd	0	2,453,743	2,453,743	15	32	47	0
	M.U. sea Foods Ltd	0	80,711	80,711	-27	-6	-34	0
Cox's Bazar	Islamia Fishing Limited-(Shrimp)	73,293	0	73,293	10	0	10	305
	Yunus Fishing Limited	112,805	0	112,805	1	0	1	0
Total Shrimp		1,748,489	6,604,774	8,353,263	13,346	(81)	13,265	9,718,494

* Direct job information is complemented using a statistical model to estimate associated job creation across the value chain.

Source of data: Partner interviews for enterprises. GHERS information is reported by the World Fish Center.

PARTNER RESULTS : LEATHER PRODUCTS

Region	Partner	Sales Increased (USD)			No. of Total Jobs Created			Investment Increased (USD)
		Domestic	Export	Total	Male	Female	Total	
Dhaka	LFMEAB - Apex Adelchi Footwear Ltd.	-	9,393,750	9,393,750	102	179	281	0
	LFMEAB - Bay Footwear Ltd.	-	2,224,755	2,224,755	-	-	-	-
	LFMEAB - Jennys Shoes Ltd	-	946,350	946,350	-	-	-	-
	LFMEAB - Landmark Footwear Ltd	-	3,205,500	3,205,500	-	-	-	-
	LFMEAB - Apex Leather Craft Fashion & Accessories	-	1,300,500	1,300,500	-	-	-	-
	LFMEAB - PICARD	-	4,462,900	4,462,900	237	281	518	-
	LFMEAB - Bengal Shoe Industries	-	2,818,165	2,818,165	2	309	311	-
	LFMEAB - FB Footwear Ltd	-	9,570,375	9,570,375	290	545	835	-
	Leather Technologist SME Entrepreneur (LTSE)	138,784	-	138,784	78	21	99	-
	COEL	-	2,196,345	2,196,345	208	484	692	180,120
Total Leather Products		138,784	36,118,640	36,257,424	917	1,819	2,736	180,120

Source of data: Partner interviews

Annex D



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PRICE
POVERTY REDUCTION BY INCREASING
THE COMPETITIVENESS OF ENTERPRISES

CASE STUDY

Promoting Better Seeds for Quality Production

PRICE assists Konika Seed Company to promote seed potato in SW Bangladesh

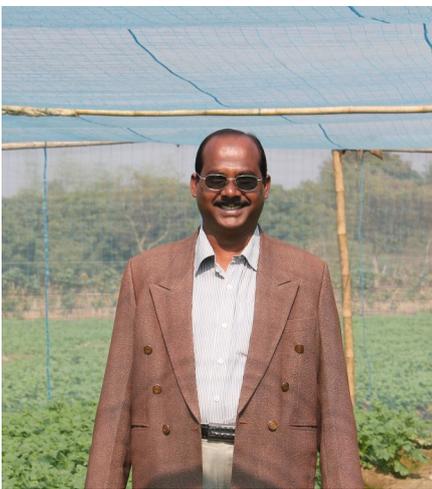


Photo: PRICE / Bushira Rahman

Md. Nur Alam Liton, Managing Director of Konika Seed Company, inside the net house of tissue culture seed potato farm.

CHALLENGE Konika Seed Company (Pvt.) Ltd. is the sole potato seed producing company in the southwest region of Bangladesh. It started producing and supplying potato seeds to Bangladesh Agricultural Development Corporation (BADC) in 1991 as a certified dealer. Even though Konika was producing potato seeds for 19 years, the seeds were not of high quality. Before PRICE's interventions, Konika faced major quality producing challenges because of inexperienced seed producing farmer groups and an unskilled workforce. Additionally, due to Konika's lack of market linkages with seed dealers and farmers, it never received a strong response in the market.

INITIATIVE In 2008, PRICE partnered with Konika to improve its potato seed production quality, increase its production quantity, link it with local dealers and retailers, and develop the skills of its farmers. With the help of PRICE, Konika organized several trainings for over 200 of its contract farmers on improved potato farming technology that would enhance the quality of the seed potato. Moreover, Konika arranged trainings for more than 3,000 of its staff members to develop their skills in sorting, cleaning, grading, and packing of seed potatoes. PRICE also helped Konika prepare several demonstration plots and arranged four field days for more than 300 dealers, retailers, and lead farmers. To create market linkages, PRICE helped Konika organize a dealer workshop for 70 localized dealers. Additionally, PRICE constantly supported the company by providing field technicians to help increase the quality of production. Furthermore, a PRICE-supported marketing consultant assisted the company to develop its marketing strategy and network. PRICE also linked Konika with the Rural Development Academy for tissue culture.

RESULTS As a result, Konika experienced significant improvements in production quality and quantity, where its production quality increased by approximately 30 percent after changing its production methodology. In 2010, Konika produced 732 MT potato seed worth \$221,585 in 85 acres of land without any assistance, which is 30 percent higher than in 2008. Additionally, it started producing table potatoes the same year. Now, Konika's quality of seed potato is similar to imported potato seeds and is also smaller in size. Recently, Konika has started producing breeder potato seeds through tissue cultures which is a new production method in Bangladesh. In 2012, Konika produced 948 MT of breeder potato seeds and 524 MT of table potatoes in 131 acres of land worth \$357,496. In 2012, the company expanded with the support of its newly-developed, strong marketing network that reaches across 23 districts of the southwest region of Bangladesh. It is also well-connected with 85 dealers and retailers and popular among potato growers because of its supply of high quality seeds. Konika also created job opportunities for 27 full-time staff members and more than 5,000 part-time workers.



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PRICE
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New Opportunities through Fish Farming

PRICE's aquaculture intervention with MMSS is helping Bogra fish farmers increase their production capacity



Photo: PRICE / Bushra Rahman

“Through PRICE-supported trainings and an in-country study trip, I was inspired to start over and had the courage to try farming new species for the first time.”

Md. Faruk Shaikh

In Bogra, Md. Faruk Shaikh started fish farming 18 years ago out of necessity as he had difficulty finding a job as he dropped out of school in eighth grade to support his family. After receiving training from Jubo Kalyan Shangstha in 1992, Faruk started his journey as a fish farmer but he could barely make any profit. Initially he started fish carp and pangash farming in two ponds covering approximately 120 decimal area of water body. He invested approximately 40,000 taka and after three seasons in that year, he produced nine tons of fish, which generated no profit. Through the years, he kept re-investing on fish farming hoping to increase his earnings and improve his quality of life.

In 2007, Faruk, along with the area's fish farmers, established a fish farming association; Murail Matsyachashi Somobay Somity (MMSS) to bolster their fish farming. In 2009, Faruk became a beneficiary farmer of PRICE through MMSS, where he received PRICE-facilitated training on improved technology in fish farming. Through this training, Faruk learned how to farm fish effectively, including pond preparation, nursing, and till marketing.

After he received the training in 2009, he farmed with renewed inspiration. Leasing one more pond, he invested approximately 600,000 taka and farmed mixed culture of carp and pangas. This year, he applied his knowledge in each step. In that season, Faruk received a tremendous result. The production increased approximately by 90 percent and he produced approximately 3,000 kg of fish from each pond, making a profit of 45,000 taka.

In 2011, PRICE facilitated an in-country study trip for lead farmers of MMSS. Faruk was selected and he visited Valuka and Mymensingh. Through this firsthand experience, Faruk was highly inspired to farm new species in his farming area. “Through PRICE-supported trainings and an in-country study trip, I was inspired to start over and had the courage to try farming new species in the region for the first time.” When he came back from the in-country study trip, he started farming stinging catfish, which is a new species in the region. Furthermore, the new knowledge that he gained on mixed culture from the study trip has given him a clear sight to increase production further.

In 2012, Faruk leased seven ponds where he invested 1.2 million taka and farmed a mixed culture of carp and pangas. He also started farming new species in Bogra, such as stinging catfish farming, which he observed in Mymensingh during his in-country study trip. During 2012, he produced approximately 7,000 kg of carp fish and 1,000 kg of stinging catfish, earning a profit of 160,000 taka. With the support of PRICE, Faruk has made great progress and now is a lead farmer in MMSS. Additionally, he has been helping develop the cooperative, with the support of PRICE, as the managing committee member.

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CASE STUDY

Developing SMEs for the Mainstream Market

PRICE is assisting SME leather product producers to meet the demands of the mainstream market



Karigar's managing partner Ms. Tania Wahab with Karigar workers.

CHALLENGE Karigar is a SME leather product producer that is part of the Leather Technologists Small Enterprise (LTSE), a group supported by the PRICE project. The enterprise is headed by Ms. Tania Wahab, the sole woman entrepreneur in this SME group. Karigar began its journey in 2005 with an investment of 10,000 taka (approximately \$122) and a small range of leather products. Initially, Karigar faced tremendous challenges in developing quality products due to the lack of skilled workers, technical knowledge, access to business linkages and finance. In 2009, when Karigar partnered with the LTSE group, limited access to business linkages, low quality product development, and the lack of skilled workers still hindered Karigar's expansion to the mainstream market. As a result, Karigar worked as a third party supplier earning a profit margin as low as two percent.

INITIATIVE PRICE took several initiatives under its SME development intervention. As part of the initiative, Ms. Wahab participated in several training programs, which focused mainly on production quality, enhancing production capacity, and developing better management and documentation skills. She also participated in knowledge sharing meetings. PRICE supported the attendance of LTSE members at several linkage building workshops and fairs such as the Dhaka International Trade Fair of 2011 and 2012 and the 2012 National SME Fair where they were able to promote Karigar's products directly to consumers and make connections with potential buyers. PRICE also helped create linkages with a commercial bank for the LTSE group for better access to finance.

RESULTS In 2012, Karigar started successfully expanding its business. The enterprise created job opportunities for 20 full-time and 100 part-time leather product workers. Karigar introduced new advanced tools and machineries in its factory. Sales have increased by 25 percent since 2008. With Ms. Wahab's strong leadership and oversight, the enterprise has adequate capacity to produce high quality women's bags, belts, leather jackets, and other small leather goods for local and export markets. Aside from local sales in Bangladesh, Karigar has exported small leather goods to Switzerland, Japan, and the UK. Currently, Karigar's total investment is BDT 3,000,000 (\$36,500) and its profit margin has increased by eight percent because it is selling leather products directly to the buyers instead of to a third party. Additionally, through PRICE's nomination, Ms. Wahab attended the 2011 International Visitor Leadership Program in USA which also helped her to develop successful business linkages abroad.

Photo: PRICE / Bushra Rahman



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CASE STUDY

Better Livelihoods for Dyke Farmers

PRICE is assisting Renaissance to improve women dyke farmers' livelihoods by developing their farming capacity



Photo: PRICE / Bushra Rahman

Renaissance's Executive Director Ananda Mohon Biswas.

CHALLENGE Renaissance is located in the southwest region of Bangladesh in Chitolmari, Bagerhat. Its main objective is to improve rural women's livelihoods by empowering them to become involved in agricultural activities. Renaissance started its agricultural service activities in 2000, involving *ghers'* dyke farmers. Due to the lack of technical knowledge and access to quality inputs, farmers' quantity and quality of production remained low. Additionally, farmers had limited access to market and financial credits. All these factors posed challenges for these farmers.

INITIATIVE In 2011, PRICE identified Renaissance as a potential partner. Initially, PRICE provided technical knowledge for Renaissance's enlisted farmers through training programs to improve their production capacity. In late 2011, PRICE started training activities with a training target of 2,100 dyke farmers on safe vegetable production techniques. PRICE was also able to link farmers with renowned certified input sellers for better access to quality inputs. Later, PRICE assisted Renaissance in developing a supply chain for vegetables where they were able to supply directly to the regional and national markets at a better market price than the other local farmers. PRICE assisted Renaissance in establishing a crop-based financial micro credit system which resolved farmers' access to finance issues.

RESULTS As a result of the intervention, Renaissance has trained 2,100 enlisted farmers, of whom 1,450 (approximately 69 percent) were women. The enterprise has successfully transformed the dyke areas of Chitolmari, Bagethat to a new commercial dyke farming area. Renaissance established a platform of stable income source for unemployed rural women, which has been improving their livelihoods. Also, this is PRICE's largest intervention in terms of women farmers' involvement in the horticulture sector. This year alone, Renaissance has generated \$1.15 million in sales and invested an additional \$30,503 into the business. It has created 103 new jobs within the organization. Renaissance's successful vegetable supply chain from local to regional and national markets has helped its enlisted farmers' receive higher market prices. Previously, local markets had to bring in vegetables from other areas but now they are self-sufficient and supply commercially to other regions in Bangladesh. The enterprise's initiative to arrange crop based micro-credit for its farmers solved their investment issues. Additionally, the enterprise has also now started a new business as an input dealer which helps ensure that its farmers have access to quality inputs.

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