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PRICE
POVERTY REDUCTION BY INCREASING
THE COMPETITIVENESS OF ENTERPRISES

POVERTY REDUCTION BY INCREASING THE COMPETITIVENESS OF ENTERPRISES BANGLADESH

QUARTERLY REPORT OCTOBER-DECEMBER 2012



POVERTY REDUCTION BY INCREASING THE COMPETITIVENESS OF ENTERPRISES (PRICE)

QUARTERLY REPORT OCTOBER-DECEMBER 2012

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LIST of ACRONYMS

BCOA	Bangladesh Cage Culture Owner's Association
BFFEA	Bangladesh Frozen Food Exporter Association
BSIL	Bengal Shoe Industries Ltd.
CCM	Cool Chain Management
COEL	Center of Excellence for Leather
CST	Closed System Pond Technology
DOF	Department of Fisheries
EFADF	Environment Friendly Agricultural Development Foundation
FDDI	Footwear Design and Development Institute
FFS	Farmer Field School
FGD	Focus Group Discussions
FY	Financial Year
GDP	Gross Domestic Product
GFL	Gazi Fish Ltd.
GHERS	Greater Harvest and Economic Return from Shrimp project
GKSSE	Grameen Krishok Shahyak Sangstha Enterprise
GoB	Government of Bangladesh
GUKED	Gram Unnayan Kendra Enterprise Development
Ha	Hectare
HACCAP	Hazard Analysis and Critical Control Points
ISC	Industry Skills Councils
LFMEAB	Leather Goods & Footwear Manufacturers & Exporters Association of Bangladesh
LTSE	Leather Technologist Small Entrepreneurs
MoC	Ministry of Commerce
MoFL	Ministry of Fisheries & Livestock
MOU	Memoranda of Understanding
MT	Metric Ton
MTT	Modified Traditional Technology
NGO	Non-governmental Organization
NSS	Nazrul Smrity Sansad
OHS	Occupational Health and Safety
PCR	Polymerase Chain Reaction
PPCR	Pranti Polymerase Chain Reaction Laboratory
PJKAE	Proshikhito Jubo Kallyan Agro Enterprise
PL	Post-larvae
RDA	Rural Development Academy
SSOP	Sanitary Standard Operating Procedures
SME	Small and Medium Enterprise
SMSC	S&M Shrimp Culture Ltd
SW	Southwest
TC	Tissue Culture
TBMP	Traditional Best Management Practices
USAID	United States Agency for International Development
WF	WorldFish

EXECUTIVE SUMMARY

PRICE has successfully completed its 5th year and is continuing to strengthen value chains that are primarily in USAID-designated Feed the Future regions in the south and southwest of the country.

During this quarter (October-December 2012), PRICE continued its value chain activities in its three target sectors; horticulture, aquaculture and leather products. Results from this quarter include work done by SMEs and associations that partnered with PRICE and increased their sales by \$22 million and created 3,000 new jobs across the value chains. In addition, investments in new technology increased by nearly \$411,000. During this period PRICE continued to focus on training and reached nearly 8,165 farmers and SMEs. Trainings were conducted on improved management practices and the proper use of new technology. 1,550 of these trainees participated in the refresher training, lessons learned workshops, sector awareness or capacity building programs. Overall, PRICE supported 360 workers as part of the workforce development program

PRICE Performance (Oct-Dec 2012)	
INDICATOR	ACHIEVED
<i>Sales increased</i>	\$22 million
<i>New jobs created</i>	3,016
<i>Investment increased*</i>	\$411,000
<i>Individuals trained in technology or management</i>	8,165
<i>Persons trained in workforce development</i>	367
<i>Farmers and enterprises receiving access to loans</i>	6,643

*For investment figures, thousands have been rounded

Horticulture

In the horticulture sector, PRICE continued its activities in potato, eggplant, mango, dyke cropping, onion, and tomato crops. To produce higher and better quality yields, PRICE continued to promote the use of high quality inputs and introduced new compost and pest management techniques. To receive better prices at the market, PRICE encouraged better post-harvest handling practices and helped establish market linkages by working with several SMEs, farmer associations, NGOs, and enterprises. During this quarter, through its contract farms, PRICE facilitated a total of 289 training sessions on using improved technology for potato cultivation. PRICE also provided trainings on using organic compost for potato and tomato farms, improved technology on dyke cropping and post-harvest management, and trainings on farm management of onion cultivation. These trainings helped farmers increase their production

and the quality of their yields. PRICE's horticulture partners increased their sales by approximately \$9.6 million and created 452 new jobs in the sector. The total investment from farmers was increased by \$97,000 and 8,140 farmers were trained on management techniques or using new technology.

Aquaculture

The aquaculture sector continued its activities, mainly in the southwest region of the country, to improve the fish and shrimp subsectors by promoting eco-friendly aquaculture practices. PRICE continued implementing previous activities and training programs that focused on encouraging integrated farming, embankment and cage farming, in-house counseling, lessons learned workshops and follow-up programs for beneficiaries. Additionally, PRICE signed memoranda of understanding (MOU) with five partners in the southwestern region of the country and completed assessments of technical and business needs for the beneficiaries.

PRICE also promoted the use of screened shrimp post-larvae among the farmers through the Greater Harvest and Economic Return from Shrimp (GHERS) initiative, a subcontract with WorldFish which expired on December 31, 2012. The project also assisted the beneficiaries in access to better inputs, including seed and feed, as well as market linkages between farmers, depots, wholesalers, and processing plants. As a result, PRICE's partners in the aquaculture sector increased their sales by approximately \$4.8 million, created 2,414 new jobs in the sector, and increased their investments by \$314,000. In this quarter, 25 farmers received trainings on better management techniques or on how to use new technology appropriately. 650 farmers participated in awareness or capacity building training sessions and 145 participated in workforce development programs.

Leather Products

In the leather products sector PRICE continued its support of SME development, workforce development, and increasing access to bank loans by linking banks with SMEs. PRICE also continued to support institutional capacity through training programs and also conducted an awareness campaign by broadcasting a public service announcement during Eid-ul-Azha to improve the quality of basic raw materials. During this quarter, PRICE's support generated additional sales of \$7.78 million, created 150 new jobs, and trained 222 employees in the workforce development program.

SECTION I: HORTICULTURE

PRICE continued to support the production of high value vegetables including its three focus crops, potato, eggplant, and mango. PRICE supported these crops by increasing productivity, minimizing post-harvest losses, improving access to high quality seeds and other inputs, promoting the use of compost, and adopting integrated pest management practices. Additionally, increased access to markets helped contribute to the domestic supply of produce. During this quarter, PRICE, in collaboration with several farmers associations, NGOs, and companies, worked towards strengthening potato, eggplant, and other high value horticultural crop value chains to improve farmers’ livelihoods, particularly in the southern region of the country. PRICE also helped partners organize trainings for farmers on potato production and post-production technology, safe production of vegetables in the dykes of Khulna and Bagerhat districts, and production and promotion of vegetable seeds and vermi-and tricho-compost. PRICE also supported the introduction of new potato and high value vegetables by establishing several demonstration farms and promoted vegetable seed production through contract farming.

PRICE intensified its support in the southern regions of Bangladesh as one of the FtF partners of USAID. From October - December 2012, the horticulture partners assisted by PRICE increased their sales by \$9.6 million, mostly being generated in the southern districts. Seed potato growers made the highest increase of \$2.3 million, as Blue Moon International and Renaissance contributed \$981,000 and \$950,000 respectively. Additionally, these increased sales created a total of 452 full time equivalent jobs (70 were women) and increased investments of \$97,000 in this reporting period. Konika Seed Company Ltd. also played a substantial role by contributing \$57,000.

<i>Sales increased</i>	\$9.6 million
<i>New jobs created</i>	452
<i>Investment increased</i>	\$ 97,000
<i>Individuals trained in technology or management</i>	8,140

*For investment figures, thousands have been rounded

A.1. Supporting Tissue Culture Laboratories to Produce Disease-free Plantlets

Strengthened tissue culture (TC) laboratories are crucial for a regular supply of high quality potato seeds. Thus, PRICE has been extending technical assistance to four TC laboratories - Seed Potato Growers Association, Ferdous Biotech, Rural Development Academy, and Technology for Rural Development to strengthen their capacity to produce disease-free, high quality planting materials. TC-based planting materials were multiplied by the laboratories as well as other seed potato producing enterprises linked with the labs in order to increase the availability of high quality certified seeds. After receiving training from PRICE, technicians successfully produced high quality plantlets during the quarter and supplied them for further seed multiplication. PRICE also provided on-the-job trainings to promote a continuous technology transfer between potato field technicians and the staff of seed enterprises.

Through these efforts, the laboratories sales and production results this period were as follows:

TC Laboratory	Potato Plantlets
RDA	100,000
Ferdous Biotech	45, 000
Technology for Rural Development	75,000
Seed Potato Growers Association	175,000
Total	395,000

This year's demand for plantlets was greater than previous years. This was driven by the high market price for table potato, however, most of the TC labs attempted to use their own plantlets as much as possible for further multiplication. Ferdous Biotech planted 30,000 plantlets in its own production field at Jaldhaka and Technology for Rural Development planted 50,000 plantlets in its own production area in Nilphamari. The Seed Potato Association TC lab sold 150,000 seedlings and planted 25,000 plantlets in their own fields under strict phyto-sanitary control in the net house.

A.2. Production of Disease-Free Pre-breeder and Breeder Seeds

Pre-breeder seeds, also known as basic seeds, are usually produced from plantlets produced in TC labs. PRICE has been supporting its partners in producing pre-breeder and breeder seeds for producing clean and disease-free high quality potato seeds so farmers have adequate access to certified seeds. Since there is a risk of infection from various diseases, especially viruses, the next two cycles of disease-free seed production from the mini-tubers or pre-breeder seeds are required to be placed in protective net houses in strict phytosanitary measures. PRICE provided technical support to ensure that potato seed enterprises follow strict control measures in disease-free seed production, instead of multiplication from certified seeds. High quality seeds will ultimately contribute to increased production of potato, increased income, increased jobs, and food security of the smallholders.

During this period, PRICE provided experts to assist Ferdous Biotech Ltd., Potato Seed Growers Association, Konica Seed Company Ltd., Unique Seed Company, and Sajib Seeds to organize breeder and foundation seed production from pre-breeder seeds in net houses.

PRICE's provided technical support to Konica Seed Company to expand its potato seed production in order to cater to the needs of the potato farmers, focusing in the south. The company continued producing breeder seeds of the Cardinal and Diamante variety from mini-tubers on one acre of land under net houses. The company also established seed plots for foundation seed production on 2.02 ha of land from its own breeder seeds produced in net houses last year.

Unique Seed Company established basic seed production of the Diamante and Cardinal potato varieties (from TC-based plantlets purchased from RDA Bogra) on 17 decimals for pre-breeder seed production, and 132.03 decimals of pre-breeder seed for production of breeder seeds under a net house. They also planted breeder seed on 13.35 ha of land for production of foundation seeds in the Sherpur area.

Sajib Seed, another PRICE partner, planted plantlets on 25 decimals of land, and pre-breeder seeds on 5.67 ha for the production of Diamante and Cardinal breeder and foundation seeds. PRICE is also assisting Technology for Rural Development in disease-free potato seed production. This year, the company planted on 33.99 ha of land of which the enterprise planted tissue culture plantlets across one acre and pre-breeder seeds in a four acre net house for production of pre-breeder and breeder seeds. The company planted breeder seeds on 20.23 ha and foundation seeds across 13.35 ha of land in Golna, Joldhaka to produce foundation and certified seeds.

PRICE has been assisting Ferdous Biotech (Pvt.) Limited to improve its capacity of clean seed production. This year the company planted plantlets across 82 decimals and pre-breeder seeds on 1.67 ha under net houses.

A.3. Supporting Seed Contract Farming for Production of Certified Seeds

PRICE assisted several potato seed enterprises to produce certified seeds in order to provide better access to poor farmers across the country, particularly in the south. Konica Seed Company, a PRICE-supported southern seed enterprise, extended their potato contract farming area to Bondog of Loknathpur, Kadipur of Damurhuda upazila and Baiddanathpur of Jibon nagar upazila, Bakundia of Jibon nagar and provided hands-on training to 180 contract farmers to produce Cardinal and Diamante variety seed potato across 60.30 ha. In addition to providing financial support, Konica also supplied disease-free foundation seeds (90,000 kg), fertilizer, and other chemicals to their contract farmers. PRICE has been providing field-based technical assistance to the contract farmers during the production period.

Ferdous Biotech, another PRICE partner, also organized contract farming involving 12 contract farmers across 5.26 ha in Joldhaka, Nilphamari, and Darabaria, Chuadanga. Seed and other inputs were provided by the company for certified seed production of Diamante, Cardinal, and Granola varieties. Aside from contract farming, the enterprise also planted breeder seeds across 2.67 ha of land and foundation seeds in 3.34 ha for the production of foundation and certified seeds.

A. POTATO

PRIDE Agro Enterprise continued seed potato production through contract farming in the Jessore area by involving 40 new potato farmers. PRICE provided support to organize trainings for the new contract farmers on “seed potato production through contract farming”. PRIDE Agro Enterprise organized the supply of 19,000 kg of potato seeds to the contracted farmers that received training. The enterprise supplied 6,000 kg of breeder seed (sourced from Classic Seed Company) and 13,000 kg of foundation seed for the farmers. Seed farmers of the enterprise planted breeder seeds on 4.05 ha of land and foundation seeds on 8.50 ha in Shomeshpur village in Jessore. PRICE is assisting the farmers by providing regular technical service.

PRICE is supporting Blue Moon International on the multiplication of foundation seeds of processing variety (Courage) in Rangpur and Syedpur on 20.23 ha of land.

PRICE has also established linkages between the Seed Certification Agency and potato seed enterprises, which will eventually help in certifying the seeds produced by the partners.

During the reporting period, Konica Seed Company marketed 900,520 kg of seed potato and 30,540 kg of table potato, generating \$392,851.48 in sales of seed and table potato. Furthermore, this created employment opportunities for 75 workers (49 male and 26 female). Ferdous Bio-tech marketed 195,000 kg of seed potato, generating \$116,272.07 during the period. PRIDE Agro Enterprise marketed 24,540 kg of certified seed generating \$10,603.

A.4. Demonstrations of Certified Potato Seeds in the South

Konica Seed Company established three demonstrations to showcase performance of the foundation seeds of Cardinal variety of potato produced last year in three separate farmer’s plots located at Bokundia of Jobonangar, Chuadanga District, Soudi of Kotchandpur, and Jalilpur of Moheshpur under Jhinaidaha District. Potato seeds were planted during the last week of November when the crop conditions are very good.

Two more seed plot demonstrations were established with two new varieties of imported certified seeds (Asterix and Sagita) at Loknathpur to discover the performance of these varieties in local conditions. Crop condition has been good and therefore good quality seed is expected from the plots.

A.5. Performance Trials of New Processing Potato in the Feed the Future Target Area

In the southern area of Bangladesh two major table potato varieties - Diamante and Cardinal - have been cultivated for more than two decades. PRICE took the initiative to introduce three new processing-type potato varieties to these farmers.

Six demonstration plots were established using an imported certified seed variety of potato named Courage. Two plots were in Jessore Sadar, two in Jhikorgacha upazila, one in Bagherpara upazila, Jessore, and one in Jhenaidaha district. Each of the demonstration plots were established on 60.13



A farmer in his seed potato demonstration plot

A. POTATO

decimals and farmers were provided hands-on training on cultivation of the new variety of potato. Another varietal performance trial was established at Rajapur in the Jessore Sadar area on 40 decimals of land. This trial used tissue culture foundation seeds of Courage, Lady Rosetta, and Asterix and was created in order to see the performance of the new variety in the area. Another three demonstration plots were established with Courage, Asterix, and Sagita with each variety in 10 decimals of land in Ujirpur (Barisal) which is not a traditional potato growing area.

Seed sowing was completed during early December and technical supervision was provided to ensure quality potato production.

A.6. Promoting Processing Type of Potato Production for Value Addition



Potato field of contract farmers at Jessore

Since introduction of Asterix, Courage, and Lady Rosetta in the north and Munshiganj through PRICE-supported organizations, expansion of the varieties has continued during the year. This is due to high market demand by the consumers as well as potato chip producing companies.

During the current potato planting season, Murail Cooperative Association, Shibganj upazila Farmers' Cooperative Society Ltd., GUKED, Sajib Seeds, and Blue Moon International continued working with their associated farmers to produce processing types of potato. PRICE is assisting Blue Moon International in organizing contract farming for the production of the processing type

of potato, particularly, Courage in Debiganj, Rangpur, and Munshiganj area to supply potatoes to Bombay Sweets to produce potato chips. PRICE supported Blue Moon International to train 230 farmers at Debiganj of Dinajpur, 45 farmers in Munshiganj sadar, and 108 farmers in Tungibari upazila under Munshiganj District to produce the processing type of potato, particularly the Courage and Asterix varieties. About 84.98 ha of processing types of potatoes have been planted by the contract farmers of Blue Moon International. Moreover, Blue Moon International established 51 demonstration farms with newly released varieties of Sagita, Asterix, and Courage, in Kurigram, Thakurgaon, Dinajpur, Rangpur, and Munshiganj.

During the current season, cultivation of the processing type of potato in and around Munshiganj, Dinajpur, Rangpur, Nilphamari, and Bogra has increased due to increased access to high quality seeds, better training, and higher market prices. This will eventually increase the supply of processing type of potato for the processing industry.

A.7. Facilitating the Increase of Table Potato Productivity

With increased focus in the south and southwestern districts of Bangladesh, PRICE started to expand potato production in the south by assisting several partner organizations. PRICE extended its MOUs with all agro enterprises from the Jessore-Khulna region, particularly with Dipti Agro Enterprise, Jagoroni Agro Industries, Proshikkhito Jubo Kalyan Agro Enterprise,

A. POTATO

Rural Reconstruction Foundation, and PRIDE Agro Enterprise to extend its service area and support thousands of new potato growing farmers.

Working with the enterprises, PRICE helped organize smallholder farmers for potato farming and conducted 137 training sessions for 4,606 potato contract farmers in November-December 2012. Among these trainings, day-long training sessions were conducted for 3,940 new farmers while one day refresher trainings were conducted for 660 farmers.

The trainings focused on the proper use of certified seeds, seed cutting and treatment techniques, planting methods, fertilizer doses and fertilizer application methods, use of compost, earth raising, pest and disease identification and control, spraying schedules, type and doses of pesticides, irrigation schedule and water management, maturity index, haulm pulling harvesting, and curing.

PRICE supported PRIDE Agro Enterprise to organize trainings for 22 batches of refresher trainings that covered 660 farmers and 37 batches of new farmers covering 1,110 potato farmers (153 female) of Churamonkathi, Balihat, Abdulpur, Shorupda, Pirerghat, Nishchintopur, Hyatpur, Hoibatpur, and Bijohnagar villages under Jessore sadar upazila. The newly trained 1,110 farmers have planted approximately 283.28 ha of Cardinal and Diamante variety of potato. PRIDE Agro Enterprise provided fertilizer and pesticides to 210 contract farmers of Shomeshpur and Abdulpur villages of Jessore sadar. The enterprise is organizing farmers for contract farming of seed potato (Cardinal and Diamante) and has been assisting with input supply and technical supervision. Crop conditions are good on all of these plots.

Proshikhito Jubo Kallyan Agro Enterprise (PJKA)E organized day-long farmer trainings on improved technology of potato cultivation for 270 farmers during the November-December time period. The enterprise will eventually train 1,590 potato farmers who have planted Cardinal and Diamante potato in about 263.05 ha of land on production and post-harvest handling techniques. The enterprise supplied 24 MT of certified seeds of Cardinal and Diamante to 90 farmers of Panchbaria, Baidanthtola, and Konejpur of Jessore Sadar to plant 16.19 ha for contract farming and also provided fertilizer on credit.

PRICE supported several other enterprises and NGOs in organizing trainings for potato farmers during the period to improve their capacity in increasing productivity of potato. The Rural Reconstruction Foundation organized day-long trainings to 372 male and 628 female farmers of Khujura and Charvita of Jessore Sadar upazila in 35 batches on potato production and harvesting techniques. Dipti Agro Enterprise gave training to 450 potato farmers on modern potato cultivation techniques, post-harvest management, and product marketing in Jikargacha upazila under Jessore district throughout this quarter. Jagoroni Agro Enterprise organized trainings on improved technology on potato cultivation through contract farming for 210 farmers. PRICE assisted the Society Development Committee of Faridpur to train 180 newly contracted potato farmers on improved farm management on potato cultivation through contract farming. In total, 148 male and 32 female farmers of Kadiridi, Doronodhordi, Ramdia, Chator, Charkandi Chator, Kadiridi, and Chator village of Boalmari upazila under Faridpur district attended the training.

B. EGGPLANT AND OTHER VEGETABLES

Summer crops, particularly, eggplant, tomato, beans, bottle gourd, pumpkin and chili had a very good yield this year and market prices were quite rewarding. However, planting of winter crops was delayed in some areas. Eggplant is the cash crop of smallholders and it was planted in December as a winter crop in the southern belt of the country while in some areas late summer eggplant, bean, and summer tomatoes were planted during the last harvesting stage in October. Farmers were provided technical assistance in harvesting, post-harvest handling, and marketing of summer tomatoes, eggplant, and chili during this period.

PRICE supported the training of onion farmers and established demonstrations of several new hybrids of bottle gourd, tomato, and onion varieties in Magura and Jessore region in the farmers' fields.

B.1. Supporting Eggplant Farmers in the South for Sustainable Production

PRICE assisted PRIDE Agro Enterprise (Jessore) in providing technical assistance to 1,230 eggplant farmers of Monirampur, Churamonkathi, Bagherpara, and Sadar upazila of Jessore, growing eggplants on over 182.11 ha of land. Farmers were provided technical assistance in raising seedlings by using compost and following hardening techniques before transplantation. As a result, hardened seedlings were established easily in the main field and seedling mortality was negligible. This has helped farmers to minimize the cost of re-transplantation. Seed beds were covered with nets to control insects and soils were sterilized. Most of the farmers used compost in the main field which was never done before. Eggplants were well established in the main plots and proper intercultural practices were followed.

B.2. Assisting Eggplant, Chili and Tomato Farmers in the South on Harvesting and Post-Harvest Handling

In October, Polly Prokrity of Magura organized 15 farmer's yard meetings where 450 farmers were given important technical techniques to maximize the time between harvesting and marketing. The tips included cleaning and soaking eggplant in water prior to transporting long distances, proper packing of green chili, and using crates for summer tomato transportation. These trainings took place at Malondo, Rajbanshi Para and Chandrapratap of Magura Sadar.



A chili farmer in her crop field

PRIDE Agro Enterprise organized 18 technical training sessions involving 200 tomato, 215 eggplant, and 65 summer bean farmers at Hybatpur, Shahbazpur, Doulatdihi, Hurgati, Llauri, Taherpur, Dadpur, Balrampur, Rostompur, and Abdulpur. Training focused on the problems faced by the farmers on harvesting, post-harvest handling, pest control, and marketing.

B. EGGPLANT AND OTHER VEGETABLES

B.3. Promoting Onion Production in the South

PRICE supported Polly Prokrity to organize training on improved production technology of onion to 480 farmers. Farmers learned about germination testing and the attributes of good quality seeds, seed bed preparation, raising seedlings, transplanting to the main field, hardening, balanced fertilizer management, irrigation scheduling, pest and disease management, and harvesting and post-harvest handling.

In total, the 480 onion growing farmers of Sherpur upazila participated in the training conducted at Char-horichandi, Char Joka, Shaheb para belghata, Goaspur Chargoal para, and Shavashad danga of Magura. Eight demonstrations of high yielding varieties of pumpkin, bottle gourd, and tomato, were established at Chandrapratap and Malanda of Magura to popularize new high yielding crops among the farmers.



Eggplants in a dyke farm

The Society Development Committee also organized trainings for 450 onion farmers in 15 batches on integrated onion crop management at Vabukdia, Kawlikanda, and Patpasar villages of Shaltha upazila under Faridpur district. Farmers were trained on the importance of using high quality, modern seeds and improved farming practices. They learned about germination tests, seed bed preparation and seedling raising, transplanting seedlings to the main field, control of purple blotch disease, fertilizer and water management, and harvesting techniques. Farmers were also provided a good variety of high yielding seeds of

Tahepuri and Sursagar onion varieties.

Polly Prokrity helped market the eggplant and green chili during October and farmers of the enterprise sold directly to wholesale agents at a fair price through a linkage established between the enterprise and local wholesalers. Pride Agro Enterprise also purchased eggplant from the farmer's fields in Rajgong, Sahapur and Shahabazpur and marketed the eggplant in Monirampur market, Khulna and Kushtia. Three-hundred farmers that established linkages directly with wholesale agents sold 724,800 kg of green chilli and eggplant earning \$223,674. Through direct marketing, farmers were able to earn 10-15 percent more than those sold from the field.

C.1. Assisting Mango Farmers in Increasing Productivity

Chesta Agro Enterprise assisted their 567 mango farmers to undertake orchard floor tilling and provided fertilizer for the mango orchard during October and November 2012. Hands-on training was provided to 432 farmers and farmers received assistance in pruning terminal twigs and cleaning the orchards. During this period 33 mango farmer groups were formed in order to provide technical services, and gain easy access to inputs and better marketing strategies. The enterprise provided regular technical support to their farmers and farmers sprayed pesticides to control mango hopper at Taherpur, Modonpur, Dulalpur, Solemanpur, and Chowghata of Chudanga. Before spraying dried branches and leaves were removed.

Adorsho Foundation Agro Enterprise organized 32 technical meetings focusing on orchard management, application of fertilizer, pest control - particularly mango hopper, involving 279 farmers at Loknathpur, Protabpur, Jebonnager, Darshona, Chuadanga, and adjacent areas. By attending these meetings the farmers learned modern production methods, including planting material selection, planting time and techniques, fertilization and irrigation, pest and disease management, harvesting and post-harvest handling, and marketing. After proper cleaning and fertilization the orchards were irrigated and 345 trained farmers tilled mango orchard floors. Under the supervision of technical supervisors, 268 farmers have successfully pruned the trees and removed dried twigs.

Kansat Mango Farmers Association organized 17 mango farmers groups and group technical training sessions were held where 520 farmers attended the training sessions on orchard management and fertilization. PRICE technical field staff attended the group technical meeting and provided technical trainings on orchard management. PRICE supported Bonolota Farmers Association to organize 20 mango farmers groups and organized group meetings to address farmer's problems and provide them with mango orchard management trainings. Approximately 600 mango farmers of the association attended the group technical sessions on orchard management.

D. CROSS-CUTTING ISSUES

D.1. Organizing Safe Vegetable Production in the Dykes of the South

Renaissance, a southern based NGO, has organized and completed a day-long training, on safe winter vegetable cultivation in the dyke for 2,000 farmers (1,507 women) of Chitalamari, Mollahat, and Fakirhat. Through the training, farmers learned about the benefits of using high quality seeds, seedling raising and planting techniques in the dykes, proper use of compost in planting pits and balancing fertilizer use on the field, and how to construct different types of trellis for dyke crops. Additionally, 45 group meetings were held where 750 farmers (540 women) attended technical discussions held on dyke preparation, transplanting, preparation of compost, and the proper use of bio-pesticides for pest and disease control. Farmers were provided with high quality seeds, vermi-compost, and fertilizer.

D.2. Extending Dyke Farming in Khulna and Bagerhat for Safe Vegetable Production

PRICE supported EFADF Agro Business of Khulna to organize and support its activities on 279.23 ha involving 3,000 dyke farmers of Khulna and the adjacent area.

During the period, the enterprise organized 1,500 new farmers (860 women) into small groups of 30 farmers each in Lokpur, Ballavpur, Hosla, Betaga, and Patharghata. Among them, 440 farmers (271 women) of Ballavpur and Tilok were trained on dyke farming techniques for cultivation of winter tomato, gourd, cabbage, and eggplant in the dyke. Furthermore, group based technical discussion meetings were organized where technical experts spoke about the benefits of using high quality seeds for higher production, seedling raising techniques under a net house, and how to use compost and balanced doses of fertilizers and biological pesticides, particularly neem and mahogany seeds extracts.



Tomato crops in Dyke at Khulna

D.3. Demonstrations in the Dyke

PRICE supported EFADF Agro Business of Khulna which established 11 demo plots of tomato, cauliflower, eggplant, bottle gourd, and cucumber in dykes throughout Lockpur, and Patharghata to showcase the performance of several new varieties of the crops. Two tomato varieties, Godagari and Mintu Super showed excellent performance as early crops in the dyke due to proper timing of planting and aftercare.

D.4. Access to Inputs and Finance for Dyke Farmers

Renaissance and EFADF Agro Business provided technical support to farmers to make compost fertilizer by themselves to use in their dyke farms. As a result, 169 vegetable farmers of Renaissance successfully produced compost to use on their crops. PRICE assisted Renaissance to establish links with GKSS Enterprise of Bogra and signed a deal to supply vermi and tricho compost regularly. GKSS Enterprise supplied 1,550 kg of vermi and tricho composts to

D. CROSS-CUTTING ISSUES

Renaissance which was given to the farmers for dyke farming. The enterprise also became a vegetable seed dealer for Lalteer Seeds and Syngenta to ensure supply of high quality seeds to the farmers. Renaissance supplied chemical fertilizer to 1,425 farmers, vegetable seeds to 900 farmers on credit, and cash seasonal credit was provided to 320 farmers. EFADF Agro Business provided compost to 1,232 dyke farmers and vegetable seeds of ACI and Lalteer Seeds to 1,313 farmers.

D.5. Organic Compost

D.5.a. Establishing Demonstration Plots and Field Days on Use of Compost

Riya Fertilizer Company established ten demo plots to show performance of vermi and tricho compost in vegetable crop production at Raiganj, Tarash and Shahbajpur of Sirajganj Districts. The enterprise also organized group meetings to discuss the use of vermi and tricho composts on different winter vegetables. GKSS Enterprise, another PRICE supported compost making company, organized and established 11 demonstrations on potato, cabbages, cauliflower, tomato, and gourds by using composts and small quantities of chemical fertilizer at Gabtoli and Shariakanda. The company also organized 50 film shows in Rangpur, Gaibanda, Bogra, and Bagerhat on the importance of using compost and bio-fertilizers on sustainable production and soil health on crop production.

Biotech, a southern based compost company, organized six farmer field days at Juginda, Beltolapara, Chowgacha, Raghunathpur, Borshibaria, and Hasnabad of Meherpur Sadar. A total of 626 farmers at different villages attended the field days and visited nearby demonstration plots of tomato, eggplant and early cabbages and exchanged ideas with the visiting experts and demonstration farmers. Farmers reported that as a result of using compost and clean cultivation, pest attacks were low, costs for fertilizer and pesticides were reduced, and productivity increased by 20-30 percent. As a result, farmers made a better profit.

D.5.b. Adoption of Good Agricultural Practices and Sustainable Production in the South

PRICE supported Biotech to create awareness among the farmers of Mehepur in southwest Bangladesh to adopt good agricultural practices and use compost for production of vegetables. During this quarter the company organized day-long trainings for 810 farmers on good agricultural practices and proper use of compost in growing tomato and potato in Mujibnagar upazila of Mehepur.

As a part of adopting good agricultural practices PRICE supported PRIDE Agro Enterprise, Polly Prokity and EFADF Agro Business to collect 135 soil samples from farmer's fields for nutrient analysis. Soil samples were taken, dried, packed, and then sent to soil testing laboratories to be analyzed. Once tested, farmers are able to understand the nutrient levels of their soil and can use compost and fertilizer appropriately.

D. CROSS-CUTTING ISSUES

D.6. Vegetable Seeds

D.6.a. Promoting Hybrid Vegetables through Farmers Field Days

PRICE has been supporting Lalteer Seed Company to train seed dealers and farmers to establish demonstrations followed by field days. During the period, Lalteer Seed Company organized six farmer's field days at several locations in Jessore so farmers could share experiences of growing the new hybrid varieties of bottle gourd and yard long bean. Public representatives, Department of Agricultural Extension personnel, seed dealers, Lalteer Seed, PRICE representatives, and 100-150 farmers attended each of the farmer's field days.

Attending farmers and guests visited demonstration plots of Martina and Diana variety of bottle gourds, BARI-4 summer tomato, and yard long bean-1,070 grown on 15-20 decimals of land at Bagerpara, Jhikargacha, Monirampur, and Keshabpur of Jessore. Crop yields of the new varieties almost doubled the existing varieties grown. Demonstration farmers shared their experiences of growing these crops including their yields and their sales with the experts and visiting guests. Farmers reported that by using the new vegetable seeds their yields increased by 40-60 percent compared to existing varieties and their incomes also significantly increased. Market demands for the new varieties were good. Experts shared their knowledge with the farmers on production and post-production technology, proper use of inputs and timely plantation and harvesting techniques that will help them achieve maximum profit from the new varieties.

D.5.b. Promoting Good Quality Vegetable Seeds through Contract Farming

Padma Seeds organized 34 group meetings to start contract growing of vegetable seeds. Approximately 424 vegetable seed farmers of Soighoria, Nogorpur, Borosolua, and Nagarbather villages of Sorojganj Chuadanga attended the meetings. During discussion meetings farmers were exposed to contract farming systems, quality of breeder seeds, 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. Padma seeds provided 140.5 kg of red amaranth, bitter gourd, cucumber, ridge gourd, radish and pumpkin seeds to the 576 contract farmer of Chowgasha, Monirampur, Jibonnagar, Meherpur sadar, Jessore sadar, and Chuadanga sadar upazila. Additionally, 25 sprayer machines and \$2,007 were provided to the farmers for pest control and seed production. After providing seeds and other inputs, the enterprise signed a formal contract with trained farmers for seed production under the leadership of selected farmer group leaders.

D.7. Market Linkages

D.7.a. Facilitating Market Linkages for Compost and Seed Potato

PRICE assisted its partner enterprises in strengthening their marketing networks through establishing market linkages. PRICE supported GKSS Enterprise, Riya Fertilizer, Konica Seed Company, Ferdous Biotech, PRIDE Agro Enterprise and several other partners in building new market linkages.

D. CROSS-CUTTING ISSUES

PRICE assisted GKSS Enterprise in marketing its tricho and vermi compost as well as tricho power. The enterprise sold 186 MT of compost and 500 liters of tricho powder earning revenue of \$48,148. PRICE supported Pride Agro Enterprise in marketing seeds and fresh products. The enterprise generated sales revenue of \$24,540 during the quarter of which \$10,603 was from sales of seed potato, \$5,180 from sales of fresh summer bean, \$3,367 from summer tomato, and \$4,487 from sales of summer eggplant.

PRICE supported Ferdous Biotech in establishing a market network through which the enterprise sold 195 MT of different categories of clean seeds and earned revenue of \$116,272. PRICE supported Konica Seed Company to market potato seeds and vegetable seeds during the season. The enterprise generated sales revenue \$47,686 from sales of 900,520 kg seed potato, 30,540 kg of table potato and from 224 kg vegetable seeds. The company organized a marketing campaign for its potato seed.

D.7.b. Facilitating Access to Finance

Konica Seed Company provided credit amounting \$16,666 to 150 farmers of Chuadanga and Moheshpur to purchase fertilizer and irrigation equipment to meet other expenses for farming 46.54 ha of potato seed. The credit provided by the Konica Seed Company is interest free and is adjusted during buying of seed potato from the farmers.

Rural Reconstruction Foundation provided seasonal credit to 682 vegetable farmers amounting to \$85,148 for cultivating winter vegetables. Jagoroni Agro Industries provided \$95,938 among 323 farmers for growing potato and other winter vegetables. PRIDE Agro Enterprise provided \$1,851 to 44 potato contract farmers from its own funds and linked two local micro finance lenders with 74 farmers. Renaissance gave \$25,679 as winter season credit to 320 dyke based vegetable farmers, mostly women farmers for growing winter vegetables, particularly tomato.

GUKED Enterprise Development provided seasonal loans totaling \$246,913 to 2,050 potato farmers of Bogra during the current season. Padma Seed Company also gave \$2,007 as seasonal credit to 542 small vegetable seed producers of Chudanga and Meherpur, which would be adjusted with the cost of seeds when seeds will be bought by the company.

The Social Development Society provided crop based seasonal loans worth \$125,000 for potato and onion cultivation among 405 farmers at Kadirdi, Doronodhordi, Ramdia, Chator, Charkandi Chator, Kadirdi, Chator, Sonapur, and Gordia villages of Boalmari and Shaltha upazila under Faridpur District.

D.8. MOC Team Visit to PRICE Horticulture Site at Khulna

Two officials from the Ministry of Commerce (MoC) visited PRICE horticulture sites at Khulna to see the ongoing activities of the project. PRICE's horticulture team leader accompanied the team. The MoC team visited dyke farming at Bollovepur and Lockpur, Rupsa (Khulna) and met dyke farmers trained by the project. Farmers informed the team that dykes were never used for commercial production of vegetables before the intervention of PRICE. The MOC representatives were impressed to see excellent tomato crops grown by the men and women dyke farmers of the area and farmers informed them that they received training of high yielding

D. CROSS-CUTTING ISSUES

varieties, composts and fertilizer, and learned pest management following IPM. The MOC representatives also learned about the market linkages that have been established with the local wholesale market how the farmers receive regular market information from EFADF Agro Business.



MoC officials are visiting dyke crops at Khulna

PRICE partner EFADF Agro Business organized a day long training session titled improved farm management on dyke vegetable cultivation in November. Women vegetable farmers attended the training session at Tilok, Rupsa (Khulna) district and visiting officials observed the training session and interacted with the farmers.

SECTION II: AQUACULTURE

The fishery sector is the main supplier of animal protein for the domestic population's consumption. It contributes about 22 percent to the agricultural gross domestic product (GDP) with an average annual growth rate of six percent (DoF, 2012). The sector is important to alleviating poverty through income generation, job creation, and self-employment. The domestic market for fish continues to expand, coinciding with a population increase and overall increase in income - both in rural and urban areas. This, coupled with the depletion of natural fish harvests due to overfishing and a population boom, has accelerated the expansion of aquaculture in Bangladesh. Shrimp and fish are the two major components of aquaculture and both have great potential for growth. Fish has potential in the domestic market and shrimp in the export market.

PRICE has been working together with its partners and public entities to address constraints hampering increased productivity in the aquaculture sector by promoting eco-friendly aquaculture practices with extended areas in the southwest regions. The project encourages beneficiaries to use high grade inputs and improved farming

<i>Sales increased</i>	\$4.8 million
<i>New jobs created</i>	2,414
<i>Investment increased</i>	\$314,000
<i>Farmers received access to loan</i>	94
<i>Persons trained in workforce development</i>	145

technologies to sustain higher stocking densities and to maximize biomass production. It also shows ways to add value to their products and how to avoid business risks. Additionally, the project continued its previous activities including arranging training programs that encourage integrated farming, and embankment and cage farming. PRICE also provide in-house counseling, lessons learned, workshops, and follow-up programs for beneficiaries that previously attended trainings and workshops.

During this quarter PRICE signed memoranda of understanding (MOU) with five partners in the southwestern region of the country and conducted assessments to determine the technical and business needs for the beneficiaries. Most of PRICE's MOUs with aquaculture partners will expire in February 2013 and the subcontract with WorldFish, implementer of the Greater Harvest and Economic Returns from Shrimp (GHERS) program, expired on December 31, 2012. However, impacts of these activities are expected to continue.

Under GHERS initiatives, PRICE upgraded farming practices and trained workers on bio-security in the shrimp value chain. To learn from other successful farmers, PRICE arranged in country study trips for aquaculture partners throughout the fish and shrimp value chain to travel to different parts of the country where fish and shrimp farming activities are more sophisticated. Additionally, Bangladesh Frozen Foods Exporters Association (BFFEA), with assistance from

A. FISH

PRICE, arranged a mass campaign to create awareness of compliance issues for fish and shrimp export.

PRICE aquaculture activities during the reported period led to additional sales of nearly \$5 million, the creation of over 2,400 jobs, and about \$314,000 in new investments.

FISH OVERVIEW

This reporting period is a transitional one, where emphasis was given to solidify achievements throughout the country using follow-up activities and completing mutually agreed commitments with partners as well as to prepare the launch of new initiatives in the southwestern region of the country.

In this quarter, PRICE worked with 18 fish partners on follow-up activities and facilitated informal trainings, counseling, and workshops to help strengthen market linkages with different supply chain

and value chain actors. These programs also focused on improved farming demonstrations, proper use of high quality grade inputs, and the advantages of procuring inputs and marketing in groups. Additionally, PRICE facilitated exposure visits which allowed skills and knowledge sharing between farmers of different capacities. PRICE also facilitated improved farming trainings for 25 cage farmers and informal group trainings for 650 pond-based farmers at farmers field schools (FFS).

Sales increased	\$4.1 million
New jobs created	438
Investment increased	\$308,000

*For investment figures, thousands have been rounded

Overall, PRICE's partners in the fish subsector increased their sales by \$4 million, investments were increased by \$308,000 and 438 new jobs were created.

A.1. New Partners and Beneficiaries in the Fish Sub-sector

In the last quarter, PRICE signed five new MoUs with three existing partners and two new partners which will reach 3,200 additional farmers and value chain actors in the Feed the Future (FtF) geographical locations in southwest Bangladesh. The interventions are being implemented mostly in greater Faridpur, Jessore, Barisal and Patuakhali districts. Under these MoUs, farming integration and the popularization of commercially farmed species will generate increased income, food security and better nutrition. In addition, increased geographical coverage to incorporate more farming land to aquaculture will also be given attention. It is expected that by increasing farm yields and farmers' income, investment will increase. The project also short listed 12 potential partners for additional outreach in the future.

A.2. Needs Assessment for New Partners' Beneficiaries in the SW



Focus group discussion for needs assessment at Nazrul Smrity Sansad (NSS)

With five respected organizations, PRICE jointly carried out eight technical and business needs assessments through focus group discussions (FGDs). A total of 244 randomly selected farmers from different locations participated in the FGDs. Major discussion points from these meetings are summarized below:

- Most of the participants were traditional farmers of tilapia and carp.
- Farmers expected to acquire new skills, information, and knowledge on updated improved fish farming technologies, and trouble-shooting methods.
- Farmers need direct linkages with value chain actors to have better access to high quality inputs, finance, and marketing plans.
- Farmer showed keen interest and agreed to receive technical and business assistance as per the plan outlined in the MOUs.
- Farmers' expectations exceeded PRICE's mission on some points including loan facilities, supply of inputs for demonstration, and long duration training.
- A majority of the participants showed interest in mono-sex tilapia, carp and pangas culture and business. A small segment of the farmers under Shushilan in Munshigonj area showed an interest on crab farming and fattening techniques.

A.3. Upgrading of Farmers' Access to Quality Seed Supply

PRICE has continued to assist a dozen fish hatcheries and a couple of nursing and seed traders associations to ensure the use of high quality broods in hatcheries, superior fries in nurseries, and to ensure that traders are selling high quality fingerlings. Genetic corruption in the hatcheries was mitigated by ensuring the use of proven high grade brood stocks by hatcheries and preventing the use of farmed table fish in hatcheries. To ensure these steps were taken, follow up visits were made by an expatriate consultant under Winrock International's Farmer to Farmer program. Additionally, a steady supply of high quality fish seed was provided to farmers immediately after the winter to promote over-wintering techniques. These techniques are now followed by most of the beneficiary nursery operators.

A.4. Scaling-Up of Improved Farming Practices for Enhanced Productivity

During this reporting period, PRICE provided follow-up group trainings for 650 fish farmers in different regions of Bangladesh and improved management trainings for 25 cage farmers in the Chandpur regions. Most of the programs were on improved farming techniques based on commercial farming species and included information on crop rotations, seasonal crops, household based farms, and integrated farming technologies. The project aided partners to jointly

conduct diverse training sessions for the farmers, mainly covering improved, high-density, integrated, and semi-intensive culture systems and good aquaculture practices. Sessions were conducted in participatory FFSs by respective group organizers who earlier organized and attended most of the formal trainings. These were concluding sessions for existing partners not in the FtF zones and in most cases were followed by demonstrations and lesson learning workshops.

A.5. Commercial Aquaculture in SW Bangladesh

PRICE attempted to popularize commercial farming alongside household fish culture in the southwestern districts, as the project's new focus areas. Aquaculture in this region is dominated by traditional shrimp farming. PRICE has worked with fish partners to popularize pangas and tilapia fish because these species are easy to farm with supplemental feed, affordable for the poor, and an important source of animal protein and food security. The project also planned to work with household-based small and medium scale fish culture for food security and family nutrition in greater Faridpur, Barisal, and Patuakhali areas.

A.6. Increased Outreach of Better Farming and Business Linkage Exposure Trips

PRICE continued to encourage in-country study trips that allow farmers to visit better-performing aquaculture businesses in the country so that the transmission of information, knowledge, and skills among partners was significantly accelerated. During this quarter PRICE facilitated eight in-country study trips for 170 lead farmers from partner organizations in order to upgrade their culture practices. Through the in-country study trips farmers were able to interact with farmers and other value chain actors to expand their business skills.

A.7. Training for Entrepreneurs and Workforce on Cage Farming

PRICE continued to promote cage culture as an emerging new technology. Specialized training programs for entrepreneurs and workers on cage farming were arranged in Chandpur and Lakshmipur regions and initiatives have been taken to extend this successful training to other regions, especially in the coastal lowland areas of Barisal and Patuakhali districts. During this reporting period, three training programs for 25 participants were jointly organized by Bangladesh Cage Culture Owner's Association (BCOA) and PRICE.



Cage culture at Chandpur

SHRIMP OVERVIEW

In FY2011, Bangladesh earned approximately \$446 million in revenue from exports through fisheries where around 78 percent of the total earnings came from shrimp. More than two million people are engaged in upstream and downstream activities related to the shrimp industry. These activities include harvesting, culture, processing, exporting, and other ancillary activities. In Bangladesh, the brackish water *bagda* and the freshwater *golda* are the two shrimp species which are extensively farmed in the southwestern coastal districts. The project mainly works on *bagda* farming in southwestern coastal districts. *Bagda* production is done with almost no-use of supplemental feeding.

PRICE supported improved farming methods such as crop-rotation, farming integration, and promoted using disease-free and screened post-larvae (PL). The project also built awareness of malpractice and adulteration, not using banned substances, and traceable production. Moreover, the project helped shrimp value chain actors to gain new skills in bio-security measures such as hazard analysis and critical control points (HACCP) and sanitation standard operating procedures (SSOP). Through collaboration with the WorldFish (WF) and dozens of other

Sales increased	\$677,000
New jobs	1,977
Investment increased	\$5700
Persons trained in workforce development	145

enterprises, PRICE worked with Bangladesh Frozen Foods Exporter's Association (BFFEA) and the Department of Fisheries (DoF) to create an awareness program against alleged bad practices among all value chain actors.

*For investment figures, thousands have been rounded

increased their sales by about \$680,000, they invested more than \$5,700, and approximately 2,000 new jobs were created.

During the last quarter, shrimp subsector partners

B.1. Improved Shrimp Farming Practices and Capacity Development by GHERS

Most of the shrimp interventions were implemented by the GHERS initiative of the WF under a subcontract. The goals GHERS were to increase shrimp farm production, improve the quality of the produce, ensure disease-free farmed shrimp, and propagate relatively high density farming and capacity building of depots. There are three different farming methodologies that are distinct by the required initial investment and the farming management capacity. First is the closed system pond technology (CST) which has a relatively high density controlled farming system. It is the most capital intensive but it allows for more than one crop in a year. Second is the modified traditional technology (MTT) which has a more moderate stocking density and has a semi-controlled farming system. This system introduces some new practices and requires a

B. SHRIMP

smaller investment. Third is the traditional best management practices (TBMP) which is based on traditional farming methods regularly practiced by the farmers in Bangladesh.

GHERS worked in Bagerhat, Khulna, and Satkhira districts and cumulatively supported 26,105 shrimp farmers (1,853 women) on 20,480 hectares of shrimp *ghers* (ponds). In this quarter the project facilitated 87 informal training sessions on improved farming and post-harvest management, including crop rotation, post-harvest handling and marketing for approximately 1,200 farmers. This generated a sales increase of \$0.5 million and an additional investment of \$4,500 and created 2,000 new jobs in the shrimp subsector. GHERS initiatives cumulatively generated a total of increased sales of \$58 million, 10,000 new jobs and an additional investment of \$30 million during its operation period from 2008 - 2012.

B.2. Laboratory Testing to Screen Virus-Negative Post Larvae

Through GHERS, the project assisted a privately owned Pranti Polymerase Chain Reaction (PPCR) laboratory in Cox's Bazar to certify shrimp seed production in cycles so that virus-negative strains could be identified and traced. During the last quarter PPCR lab, in partnership with seven hatcheries in Cox's Bazaar and Khulna, tested and certified 15 million PL as virus-negative of which roughly 40 percent PLs were used by GHERS farmers. Additionally, PPCR supplied screened PL to Gazi Fish Ltd which is another enterprise based PRICE partner that owns a hatchery in Khulna. Gazi tests mother shrimp and *nauplii* in PPCR and then airlifts the shrimp back to its hatchery in Khulna. They use the shrimp that their two farms require and sell excess to other farmers.

B.3. Supporting Semi-intensive Farming to Enterprise Based Farms

PRICE worked with two enterprise based partners, Gazi Fish Farms Ltd. (GFL) and S&M Shrimp Culture Ltd (SMSC) who have two large scale semi-intensive *bagda* farms, operated by Saudi-Bangladesh Industrial & Agricultural Investment Company, to upgrade their culture management system. It also serves as a business incentive for other shrimp farmers acquiring hands-on lessons from those farms. GHERS established roughly 100 CST style small scale semi-intensive farms. They arranged study trips to their farms by GHERS farmers so they could observe how to operate and manage a semi-intensive farm and risk factors associated with it. The project provided workforce development training to 70 staff of those farms along with a hatchery operated by GFL. In addition to their own stockings, GFL sold additional screened PL to farmers in the Khulna region.

B.4. Training and Promoting Integrated and Crop Rotational farming

During this quarter PRICE provided follow-up support to a dozen shrimp associations and enterprises on improved farming methods. The farming methods covered included integrated farming with hypo-saline fish, prawn, and shrimp to reduce business risks. Rotational aqua farming performs better in sustainable production and reduces the risk of disease. Approximately 110 shrimp farmers received training on integrated fish farming and season-based crop rotations of *golda* and *bagda* culture in the southwest regions. Additionally, these 70 workers and staff of GFL and SMSC received workforce development training on judicious pond preparation, feeding, sampling, harvesting, and post-harvest treatments including cool chain management.

B. SHRIMP

B.5. Awareness Creation against Malpractice and Adulteration among VC Actors

To improve awareness of malpractice and adulteration, the Bangladesh Frozen Foods Exporters Association (BFFEA), in collaboration with PRICE and DoF, has completed 10 union level workforce development workshops in Satkhira, Khulna, and Bagerhat districts for more than 100 participants. They also submitted posters, leaflets and video documentaries to be processed for shrimp awareness campaigns in the southwest regions. PRICE, DoF, and BFFEA jointly implemented training programs for 100 extension agents, depot owners, and *faria* (collectors) who were directly involved in shrimp supply, icing, packaging, and marketing in these three districts. At these training sessions participatory discussions were held on hygiene and sanitation, cool chain management (CCM), HACCP, traceability, malpractice and adulteration, quality control, packaging, and transportation.



Awareness building training for intermediary shrimp traders

C. CROSS CUTTING ISSUES

C.1. Increasing Small Farmers' Access to Micro-Credits

Household-based small farmers generally lack the capital necessary to start high density farming with supplemental feeds and due to lack of collateral, these farmers cannot access loans from banks. To overcome cash flow problems PRICE has linked these farmers to micro-finance institutions with customized monthly installment-based loan repayment systems instead of customary weekly payments. During this quarter, 94 small famers (49 women) received small-scale fish loans ranging from approximately \$44-\$220.

C.2. In-house Counseling, Farmer's Field School and Lesson Learned Workshops

Four lessons learned workshops were held during this quarter where a total of 220 farmers shared the experiences they gained through in-country study trips and demonstrations. PRICE staff took an active part to disseminate information and knowledge among the participants to ensure sustainability and future progress.

C.3. Aquaculture General Discussion Event

During this period, PRICE and the Market Development Forum (MDF) jointly organized a general discussion event on sustainable shrimp productivity improvement with provision of private rural services. A total of 26 participants from MDF member organizations attended the event. The aim of the event was to fine tune the mechanisms of private rural service provisions piloted by PRICE and the WF in southwestern regions of Bangladesh. The event also served as a platform for interested member organizations to exchange their experiences in developing and implementing private rural service provision models, how to best identify potential complementary projects, and discuss their general models and overall achievements to a wider audience.

C.5. Aquaculture Lesson Sharing Workshop

Since its inception, PRICE has partnered with the WorldFish (WF) to implement GHERS, a subcontracted project that concluded in December 2012. It is notable that the project supported more than 26,000 shrimp farmers on the adoption of improved shrimp farming techniques, including the use of screened PL and other quality and traceable inputs through partner depots to enhance the integration among the shrimp value chain actors and activities.

At the end of the subcontract, WF and PRICE jointly organized a day-long workshop on “The Experience and Development of Sustainable Shrimp Aquaculture Production Practices” in Khulna. The objective of the workshop was to share and disseminate the learning of the GHERS project among concerned stakeholders. Notables from the Department of Fisheries, the Bangladesh Fisheries Research Institute, and Khulna University spoke at the occasion. The program was chaired by the Director of the WorldFish (Bangladesh and South Asia). Representatives from other institutions, policy makers, academics, and media representatives also participated in the workshop.

**SECTION III:
LEATHER PRODUCTS**

The Bangladeshi leather sector is progressing strongly and continued to show growth in the first quarter (October - December) of FY2013. The overall export target for FY2012-13, set by the Government of Bangladesh (GoB), is \$945.5 million. However, in this reporting period, the overseas sale of leather, leather goods, and footwear jumped by 17 percent, 52 percent, and 17 percent respectively as compared to the same period the previous year. In this quarter, leather has earned \$91 million, leather goods \$30 million, and footwear \$100 million from exports. The following table illustrates leather sector export performance for the GoB fiscal years 2011-2012 and 2012-2013:

Products	Export Target for FY2012-13 (USD million)	Export Performance for Oct-Dec. 2012-13 (USD million)	Export Performance Oct-Dec. 2011-12 (USD million)	% Change of export performance Oct-Dec.2012-13 vs. Oct-Dec. 2011-12
Leather	\$400	\$91	\$77.94	16.76%
Leather products	\$135.45	\$30.11	\$19.8	52.07%
Footwear	\$410.05	\$99.59	\$85.06	17.08%
TOTAL	\$945.5	\$220.7	\$182.8	20.7%

Source: Export Promotion Bureau Bangladesh

During this reporting period, PRICE focused on its existing activities rather than expanding to broader activities. In addition, to continue the legacy of PRICE's work, the leather team has focused on two special initiatives: a mass awareness campaign on proper flaying and preservation methods on television; and, a new leather cluster development at Laxmipur.

In the leather sector, LFMEAB - Apex Adelchi Footwear Ltd, Bengal Shoe Industries and FB Footwear Ltd made good progress to achieve sector sales of \$7.78 million; almost all of this increased sales revenue has come from the export market. Each of these three partners contributed more than \$1.6 million towards the total. In line with this revenue, LFMEAB-Bengal Shoe Industries alone created some 150 jobs (of which 120 were women) in this reporting period.

Below are details of the specific activities undertaken during this period:

Achievements in Leather Products (Oct-Dec 2012)	
Sales increased	\$7.9 million
New jobs created	150
Persons trained in workforce development	222

A. ASSISTANCE TO SME DEVELOPMENT

PRICE continued its facilitation role during this quarter in supporting SMEs through building and strengthening linkages with new markets, including backward linkages, and providing technical assistance in the areas of improved technology, access to finance, etc.

In previous years, PRICE supported the Leather Technologist Small Entrepreneurs (LTSE) under an agreement to develop their workforce and to facilitate market access and access to finance. With the first phase of work successfully completed, PRICE and LTSE signed an MoU for the second phase to provide technical assistance in FY2013. In this phase of agreement, PRICE will support the group on workforce skill development, supervisor strengthening, and instruction on managerial soft skills. PRICE will also facilitate activities in the area of the improved technology, capacity building, and market linkages.

A.1. Productivity Training Program to Improve SME Efficiency

Around 3,500 SMEs are currently working in the leather products sector in Bangladesh. Most of these SMEs are operating with inefficiencies that keep their competitiveness level low, thus lowering overall productivity and quality. During this period, PRICE facilitated a training program on productivity development arranged by the Center of Excellence in Leather (COEL). This three week-long intensive theoretical and on-the-job training program for members of the LTSE group was facilitated by a senior faculty member of the Footwear Design & Development Institute (FDDI), India.

The objective of this program was to enhance productivity by reducing inefficiency in the production of footwear and leather goods. It helped the SMEs to understand the production process from an international perspective combined with workplace hands-on training. Three representatives from three SMEs participated in the program. The following areas were covered during this training:

- Work factor analysis
- Time and motion study
- Productivity analysis

A.2. Technical Assistance on Improved Technology of Footwear Design and Pattern Making

PRICE, in collaboration with COEL, facilitated a training program on pattern making and design for nine SMEs from LTSE. This three week-long extensive theoretical and on-the-job training program was conducted by a senior designer from the Footwear Design & Development Institute (FDDI), India.

This training enhanced design development skills and production processes by bringing the industrial footwear workforce of Bangladesh up to international standards through enhancement of workplace skills.

A. ASSISTANCE TO SME DEVELOPMENT

Specific areas covered:

- Advance method of pattern making by sock making
- Designing and pattern making of moccasin shoes
- Designing and pattern making of safety boots
- Designing and pattern making of Goodyear constructed shoe

A.3. Access to Finance Support for the Leather SMEs

Eastern Bank Limited (EBL) Uday, a PRICE-facilitated financial product, was launched in November 2011. This product was exclusively designed for leather SMEs with two salient features - single digit interest rate and no collateral. As of December 2012, a total of 22 small enterprises have availed a total amount of \$125,000 as working capital. During this reporting period, one SME took a loan of \$6,100.

A.4. Operating Manual for SMEs

Various studies and stakeholder workshops/meetings have identified that SMEs, particularly small ones, have limited access to information regarding technology, markets, and better business practices to become more competent and to contribute more to the economy. Most small enterprises run inefficiently and do not know how to reduce these inefficiencies.

As Aarong has a strong connection with a number of small producers, it suggested developing an operating manual for leather SMEs so that SMEs can follow set guidelines for production. PRICE, in collaboration with Aarong, took the initiative to develop and publish a standard manual for the SME producers of Aarong and to guide the SME producers towards better business practices in terms of technology and management. A draft manual has already been developed with the technical support of PRICE and is under review.

B. ASSISTANCE TO WORKFORCE DEVELOPMENT

B.1. New Agreement with COEL to Address Sector Constraints

The lack of a skilled workforce is one of the major constraints to the progress of Bangladesh's leather products sector. To minimize this constraint, PRICE, in collaboration with COEL, began a year-long apprenticeship program in June 2011, with the primary target to train 1,000 footwear workers and 50 supervisors. The purpose was not only to support the training for new machine operators and supervisors and consequent job creation, but also to help make COEL an operational platform as a one-point resource hub and an adept service provider to develop, support and strengthen the workforce in the leather sector. It is envisioned that COEL will grow into a more comprehensive industry training organization, gradually taking over from LFMEAB and PRICE to fulfill the tasks of the Industry Skills Councils (ISC) and build its capacity and roles to remain sustainable. In order to build that capacity, PRICE signed the second phase of an agreement including a schema of soft skills development along with the other regular activities. This will provide training on team building, leadership, supervisory skills, communications, interpersonal skills, and other relevant topics.

B.2. PRICE Assistance in Skill Development for LTSE

PRICE supported a skill development training program for the newly recruited workers of eight member enterprises of LTSE. PRICE assisted linkages between LTSE members and lead firms and better access to finance. Three member SMEs were enlisted with one leading organization, Aarong, as sub-contractors and also received loans from two banks. Eight members (including these three) of the LTSE expanded their businesses on the basis of the support they got from PRICE and therefore requested PRICE for further assistance in developing the skills of 150 new workers hired as a part of their expansion plan. This training program began in July 2012 and 99 of the 150 successfully completed the training and then joined those eight small enterprises as full-time workers. PRICE engaged two of its trainers to train these workers using the modules developed by PRICE. Topics covered were industrial working environment, industrial rules and regulations, occupational health and safety (OHS), pre-fabricated operations, lasting and finishing.



PRICE consultant is providing training on use of brush to apply adhesive as a part of OHS

B.3. Skill Development Interventions at Bengal Shoes

PRICE, in collaboration with the Leather Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB) and Bengal Shoe Industry Limited (BSIL), has been facilitating workforce development training programs at the BSIL premises in Laxmipur since December 2011. To date, PRICE has facilitated trainings for 900 machine operators and table workers, of which 830 are women.

B. ASSISTANCE TO WORKFORCE DEVELOPMENT

The main focus of this intervention is to develop new, skilled factory operators. This initiative is now developing a skilled workforce and creating job opportunities for unemployed local women. The additional income for their families is helping them contribute to household expenses and provide better nutrition and education for their children. During this quarter, a training program for 222 trainees was arranged and 150 women successfully completed the training and joined BSIL's export production line.



International trainer is showing how to sew moccasin stitch at Rakhalia cluster, Raipur, Laxmipur

As BSIL is overloaded by overseas orders of hand-stitched moccasins, PRICE and BSIL recently launched a new moccasin stitch training program. This initiative will develop clusters near BSIL so that the women of these villages can be self-employed by sub-contracting for BSIL. The objective of this program is to develop 36 different clusters for a total of 800 women in 14 different villages at Raipur, Laxmipur.

This three month-long training program will train women on ten different types moccasin shoe stitching. During this quarter, 300 women are participating in this program training program, organized into 36 clusters. This is an ongoing program and will end in the next quarter. One international trainer of BSIL and two assistant trainers from PRICE are conducting this program. After the successful completion of this training program, trainees will earn money by working at home while still completing their regular household tasks.

PRICE is also developing a moccasin stitch manual (both video and printed version) to demonstrate the technique to other sector players so that they can use this manual to develop their workforce.

C.1. Quality Improvement of Basic Raw Materials

After discussing with various stakeholders, PRICE has identified that the poor quality of leather has been a major hindrance in increasing Bangladesh's leather industry sales. This year, PRICE's flaying awareness initiative aims to instill a sense of national responsibility among the masses who participate in Eid-ul-Azha and those groups and individuals who are actively involved in occasional flaying activities and in the trading of hides and skins. To address these audiences, PRICE produced a one minute video documentary on proper flaying and preservation methods. The best flaying practices campaign disseminated information through television broadcasts, targeting those who purchased cattle for Eid-ul-Azha. The campaign was scheduled during the last week of October 2012 and broadcasted on popular TV channels three days before Eid-ul-Azha.

The awareness campaign achieved the following:

- Mass awareness building on proper flaying and preservation of hides and skins
- Updated promotional flaying and preservation documentary for future use by sector players

**SECTION IV:
TRAINING AND
EQUITY INTEGRATION**

Women's involvement in the Bangladeshi workforce is limited for various reasons, including 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.

PRICE has been working to improve women's skills and promote income generating activities through interventions in horticulture, aquaculture, and leather products. PRICE achieves this by working with partner organizations to strengthen gender equity and to increase the involvement of young women. 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.

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 this period, PRICE conducted 310 interventions in the horticulture sector which reached a total of 2,752 female farmers. The women received direct trainings designed to increase their knowledge in production technology, proper use of organic fertilizer, vegetable cultivation, potato cultivation, and how to utilize contract farming. As a result, these female farmers are now directly involved in potato cultivation, dyke cropping, post-harvest management and onion production activities. During this quarter, a total of 420 new jobs were created in the horticulture sector of which 64 were female (15 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), Batche Shekha, Shushilon and Society for Social Service (SSS) which assist mostly women's farmers groups. These partner organizations focus mainly on homestead aquaculture to increase their beneficiary farmers' household incomes, and to increase self-employment and personal income generation opportunities.

SECTION IV: EQUITY INTEGRATION

In this quarter PRICE facilitated aquaculture sector trainings on management or technology and workforce development for 495 farmers of which 176 were female participants (36 percent). During this year, a total of 2,167 new jobs were created in the aquaculture sector of which 190 were female (nine percent) were secured by women.

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.

During this period PRICE facilitated workforce trainings for 222 workers, including 202 females (nearly 91 percent). Additionally, among the 150 new jobs created in the sector, 130 were female (nearly 87 percent) were secured by females.

SECTION IV: TRAINING

PRICE uses training as an instrumental skill development tool to build technical capacity of both individuals and groups. PRICE continues to develop training programs that focus on the promotion of management or technology, business conduct business compliance, enterprise management, technology literacy development, and industry adherence to best practices in Bangladesh and international standards.

Through partner enterprises, PRICE facilitates trainings and provides 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 two types of training activities to strengthen and develop competitiveness of our partners and build upon the capacity of our beneficiaries. The two types of trainings conducted were:

- Workforce development
- Management or technology

In this quarter, PRICE facilitated 305 training activities for 10,082 participants in all three sectors. Among the participants, 6,952 were male and 3,130 were female (around 31 percent). 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 October 2012 to December 2012

Types of Training	Total Training Events	Total Participants		
		Male	Female	Total
Workforce Development	4	165	202	367
Management or Technologies	252	5,618	2,547	8,165
Awareness/Capacity Building Programs	49	1,169	381	1,550
Grand Total	305	6,952	3,130	10,082

*Note: Awareness/capacity building program participants are selected from the trainees who already received training on management or technology. Awareness/capacity building includes study tours, lessons learned workshops, field days, farmers group meetings, etc.

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

SECTION IV: TRAINING

1. Horticulture

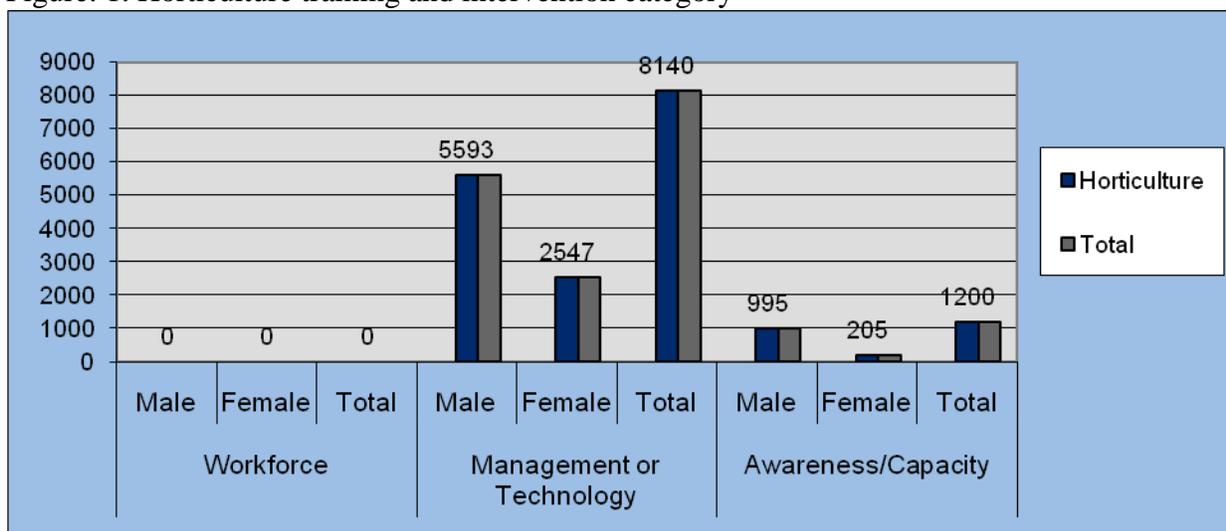
During this quarter, PRICE facilitated 289 horticulture-related trainings for 9,340 participants, of which 2,752 were female (see Table 1.1 and Figure 1 for details). Trainings held were on the following topics:

- Improved technology on potato cultivation through contract farming
- Training on tomato by using organic compost and other bio agent in profitable cropping patterns
- Training on potato by using organic compost and other bio agent in profitable cropping pattern
- Improved technology on dyke cropping and post-harvest management
- Training on improved farm management on onion cultivation through contract farming

Table 1.1: Horticulture training by type and number, October - December 2012

Types of Training Events	Number of Trainings
Workforce Development	0
Management or Technologies	251
Awareness Building	38
Grand Total	289

Figure: 1. Horticulture training and intervention category



Farmers learned improved technologies in dyke vegetable production and marketing, including topics such as quality seed source, seed bed preparation, land preparation, planting spacing, sowing technique, balanced fertilizer management, irrigation scheduling, pest and disease management, harvesting and post-harvest handling techniques, and marketing processes

SECTION IV: TRAINING

Farmers Group Meeting

PRICE partner Society Development Committee (SDC) organized five farmers' group meetings to discuss high yielding variety (HYV) seed sources, soil sample collection, fertilizer application process, record keeping, and linkages for access to finance. SDC also established effective collaboration with the private sector (inputs company- Emagreen e.g.) for quality micronutrient and pesticides.

Farmers Field Days

PRICE partner Biotech conducted two batches of farmers' field days (FFD) involving 196 farmers at Chowgacha and Beltolapara villages in the Meherpur district. The objective of the field days was to share the experience and showcase the performance of compost on yield. The visiting farmers showed keen interest to cultivate potatoes using organic fertilizer as the demo result was good and reduction in production costs were explained.

2. Aquaculture

In this quarter, the PRICE aquaculture sector facilitated a total of 15 training events for 520 participants (344 male, 176 female). Below is a table showing the types of training by fish and shrimp subsectors.

Table 2.1: Aquaculture training by type and number, October - December 2012

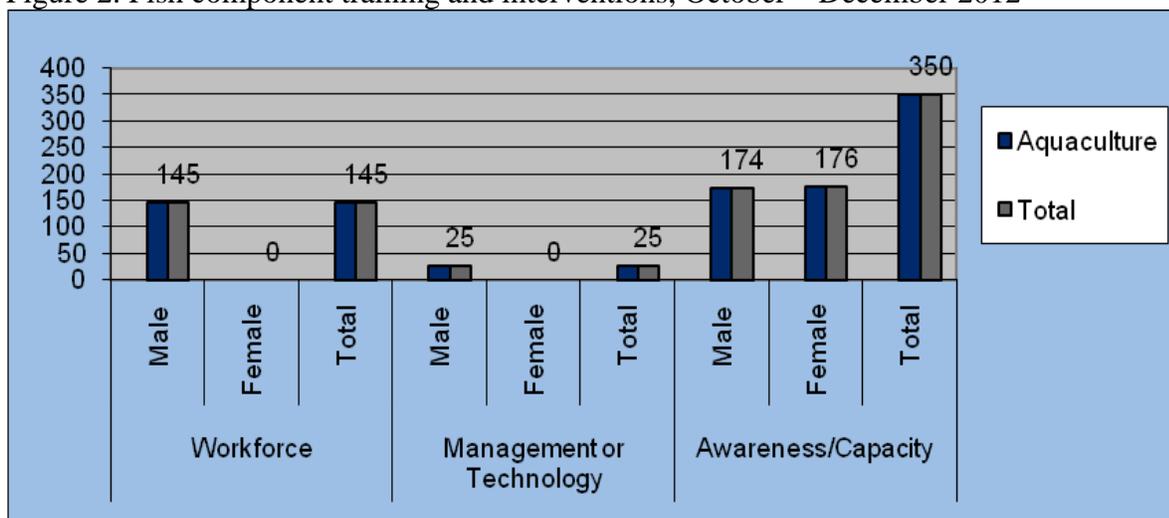
Types of Training Events	Number of Trainings in Aquaculture
Workforce Training	3
Management or Technologies	1
Awareness Building	11
Total	15

Trainings were held on the following topics:

- Workforce development and technical matters on semi-intensive farming
- Extension agent training
- Exposure visits
- Lesson learning workshops
- Improved method of cage culture and management
- Hygiene and sanitation
- Cool chain management (CCM)
- Hazard Analysis and Critical Control Point (HACCP)
- Traceability
- Unethical malpractice and adulteration in exportable shrimps and prawns
- Quality control in all levels of shrimp production to export stages
- Packaging and transportation
- Participants learned about the basics of hygiene and sanitation, cool chain management (CCM), HACCP, traceability, malpractice and adulteration, quality control, packaging and transportation

SECTION IV: TRAINING

Figure 2. Fish component training and interventions, October – December 2012



Informal Training Sessions

Aquaculture partner Mulia Motsyajibi Somity (MMS) organized two informal farmers' field schools at demo ponds sites in Batiaghata, Bagherhat. A total of 38 farmers (28 male, 10 female) attended the field schools. Technical discussions were also held on fish feeding and water quality management during winter season during the field schools.

In-Country Exposure Visit

During this week Shushilan, Rupali Fish Hatchery (RFH), Shuvro Matshya Hatchery (SMH) and Banchte Shekha (BS) organized exposure trips for a total of 100 beneficiary farmers in different parts of southern Bangladesh.

3. Leather Products Component

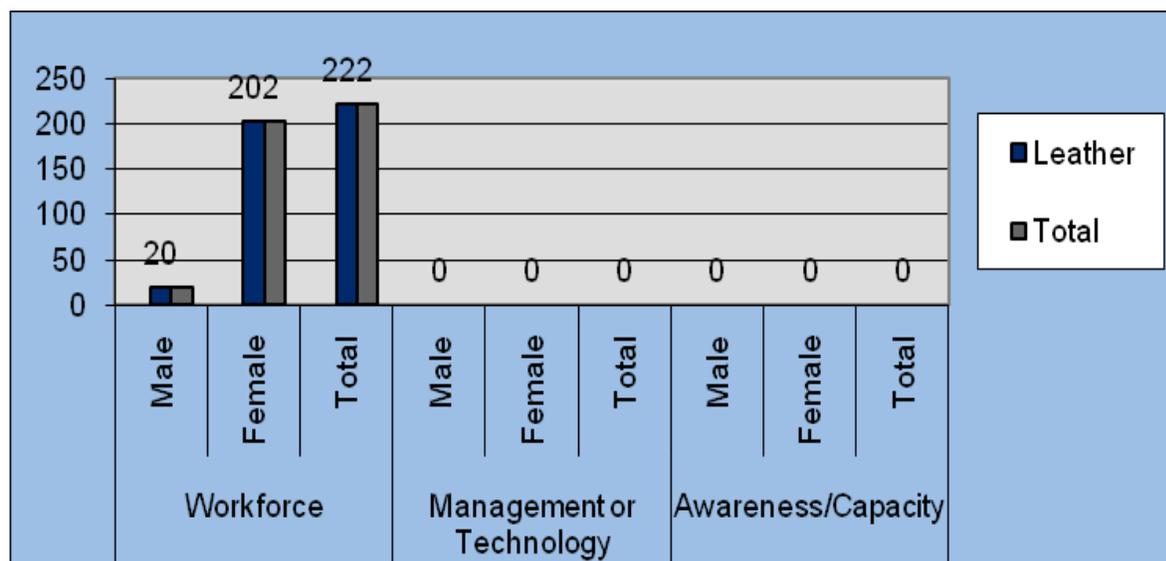
PRICE has been responsible for the joint development of skill development training programs for rural women, and young adults. One workforce development training event was held with PRICE partner Bengal Shoe Industries Limited (BSIL). The total number of participants was 222, of which 202 were females.

Table 3.1: October 2012-December 2012 leather training by type and number

Types of Training Events	Number of Trainings
Workforce training	1
Management or technologies	0
Awareness building program	0
Total	1

SECTION IV: TRAINING

Figure 3. Leather component training and intervention category in October 2012-December 2012



Trainings were held on the following topics:

- Leather selection process
- Leather cutting
- Leather sewing
- Leather lasting

With the support of PRICE, BSIL also launched a training program on environmental management systems, occupational health and safety, and social compliance for its mid-level managers. The objective of this program is to train the mid-level managers on best practices and to increase the competitiveness of enterprises by meeting international compliance standards and guidelines. Training was based upon an initial survey done at the BSIL factory.

Training on Standards Business Conduct

In this quarter, a training course on ‘Standards Business Conduct’ for the STTAs in Aquaculture, Horticulture, Leather, M & E, and operations under PRICE project was organized by the project and conducted by Mahmuda Akter Khan, Training and Equity Manager, Abdul Baten Bhuyain, Advisor, Aquaculture sector, and Siddhertha Saha, Project Support Officer, Operations. The courses were held in Dhaka, Bogra, and Jessore. A total 127 STTAs attended this training program. Training objectives were given as below:

- Promotes honest and responsible business practices;
- Educates and train employees on company policies and procedures regarding ethical business conduct;
- Assists employee in obtaining guidance and resolving questions regarding compliance with the standards of business conduct;
- Responses to claims of misconduct or violations of policies, values, and standards;

SECTION IV: TRAINING

- Ensuring that activities are conducted in accordance with applicable laws and regulations.

PRICE Training Program Conclusions

In this quarter, the results from training feedback forms indicate that approximately 90 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. Suggestions included increasing training duration, introducing more practical sessions, organizing follow-up/refresher training and providing need-based trainings. 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 trainees' needs and feedback surveys. All trainings were organized by partners and facilitated by PRICE consultants. PRICE project staff provided advice and proper guidance to achieve expected results.

ANNEXES

ANNEX I: PRICE PERFORMANCE FY 13 Q1 (OCT-DEC 2012) AND ACCUMULATED

Standard Indicators

FTF Ref.	Indicator & Disaggregation	Unit	Achievement Q1'13 (Oct-Dec'12)
4.5.2 -23	Value of incremental sales (collected at farm-level) attributed to FTF implementation	USD	9,300,301
	Aquaculture		4,069,905
	_Fish		3,182,321
	_Shrimp		887,583
	Horticulture		5,230,396
	_Potato and vegetables		5,230,396
	_Cross-cutting horticulture		0
4.5.2-38	Value of new private sector investment in the agriculture sector or food chain leveraged by FTF implementation	USD	411,318
	Aquaculture		314,137
	Horticulture		97,181
4.5.2-7	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	Number	8,165
	Male		5,618
	Female		2,547
4.5.2-5	Number of farmers and others who have applied new technologies or management practices as a result of USG assistance	Number	18,014
	New		2,271
	Continuing		15,743
	Male		13,625
	Female		4,389
4.5.2 - 2	Number of hectares under improved technologies or management practices as a result of USG assistance	Number	5,599
	New		289
	Continuing		5,310
	Male		4,594
	Female		1,005

ANNEX I: PRICE PERFORMANCE FY 13 Q1 (OCT-DEC 2012) AND ACCUMULATED

Custom Indicators

Type	Indicator & Disaggregation	Unit	LoP Target - Achievement till Sep'12 & Target (Oct'12-Dec'13)	Q1'13 (Oct-Dec'12) Performance			Accumulated Achievement till Dec'12		
				Target	Achievement	% of Achievement	Cumulative planned	Cumulative achieved	% of Achievement of LoP Projection
Custom	Total Value of Sales Increased	USD	366,387,601	13,829,757	22,305,135	161%	192,679,474	328,407,548	90%
	Domestic		232,383,305	6,618,798	13,745,946	208%	96,898,236	220,071,649	95%
	Export		134,004,296	7,210,959	8,559,189	119%	95,781,238	108,335,898	81%
	Aquaculture		198,792,236	4,000,000	4,798,844	120%	97,306,337	190,591,080	96%
	Horticulture		69,405,244	2,950,000	9,634,292	327%	35,751,243	65,014,535	94%
	Leather/Leather products		98,190,122	6,879,757	7,872,000	114%	59,621,893	72,801,933	92%
Custom	Number of Full-time equivalent Jobs Created	Number	67,274	2,170	3,016	139%	44,992	62,321	93%
	Aquaculture		43,245	800	2,414	302%	29,458	42,459	98%
	Horticulture		16,657	1,100	452	41%	11,634	13,209	79%
	Leather/Leather products		7,372	270	150	56%	3,900	6,652	90%
	Male		53,537	1,506	2,627	174%	36,262	50,577	94%
	Female		13,738	664	389	59%	8,730	11,743	85%
Custom	Total Value of Investment Increased	USD	20,992,917	655,000	411,318	63%	6,577,346	19,394,235	92%
	Aquaculture		18,437,841	400,000	314,137	79%	4,304,828	17,451,978	95%
	Horticulture		1,368,748	105,000	97,181	93%	1,042,519	1,005,929	73%
	Leather/Leather products		1,186,328	150,000	0	0%	1,230,000	936,328	79%
Custom	Number of persons participated in WF-dev prog	Number	28,400	2,400	367	15%	20,740	19,267	68%
	Aquaculture		7,969	100	145	145%	4,627	7,114	89%
	Horticulture		8,196	1,600	0	0%	4,900	2,496	30%
	Leather/Leather products		12,235	700	222	32%	11,214	9,657	79%
	Male		11,743	1,060	165	16%	12,442	7,718	66%
	Female		16,658	1,340	202	15%	8,298	11,550	69%

Type	Indicator & Disaggregation	Unit	LoP Target - Achievement till Sep'12 & Target (Oct'12-Dec'13)	Q1'13 (Oct-Dec'12) Performance			Accumulated Achievement till Dec'12		
				Target	Achievement	% of Achievement	Cumulative planned	Cumulative achieved	% of Achievement of LoP Projection
Custom	Number of Firms and farmers receiving USG assistance to access formal loan or micro-credit	Number	32,677	6,600	6,643	101%	10,158	19,780	61%
	Aquaculture		4,171	100	94	94%	2,853	3,725	89%
	Horticulture		28,478	6,500	6,548	101%	7,283	16,026	56%
	Leather/Leather products		28	0	1		21	29	104%
	Male		27,843	6,225	3,940	63%	8,104	13,463	48%
	Female		4,834	375	2,703	721%	2,054	6,317	131%
Custom	Total value of sales increased of USG assisted businesses	USD		1,400,000	5,132,835	367%	25,787,451	29,520,286	100%
	Aquaculture			800,000	728,939	91%	12,659,342	12,588,281	87%
	_Fish			700,000	939,220	134%	6,850,502	7,089,722	82%
	_Shrimp			100,000	-210,281	-210%	5,808,840	5,498,559	95%
	Horticulture			600,000	4,403,896	734%	13,128,109	16,932,005	113%
	_Potato and vegetables			350,000	2,406,131	687%	10,151,524	12,207,655	109%
	_Cross-cutting horticulture			250,000	1,997,765	799%	2,976,584	4,724,349	125%

ANNEX II: FTFMS AND PPR Q1'13 REPORT: PRICE BANGLADESH

Standard Indicators

Indicat or No.	Indicator title	Unit	Disaggregated by:	Baseline		Q1'13 Target	Achieved to end of Q1'13			FY13 Target	FY14 (Oct-Dec '13) Target
				Year	Value		FTF Zone	Non-FTF Zone	Total		
4.5.2-23	Value of incremental sales at farm level attributed to FtF implementation	US \$ mill.	Fish and shrimp	2011	79,320,356	3,200,000	2,224,326	1,845,579	4,069,905	9,600,000	800,000
			Fish and shrimp quantity in MT				1,077	1,039	2,116		
			Horticulture	2011	9,161,599	2,350,000	2,897,307	2,333,088	5,230,396	10,125,000	1,500,000
			Horticulture quantity in MT				11,338	4,369	15,707		
			Total	2011	88,481,955	5,550,000	5,121,633	4,178,668	9,300,301	19,725,000	2,300,000
			Total quantity in MT				12,416	5,407	17,823		
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	505,000	149,937	261,381	411,318	1,660,000	100,000
4.5.2-2	Number of hectares under improved technologies or management practices as a result of USG assistance	Hectare s	New		0		193	96	289	2,050	0
			Continuing		0		3,183	2,127	5,310	5,310	7,360
			Male		0		2,586	2,008	4,594	6,020	6,020
			Female		0		790	215	1,005	1,340	1,340

			Total		0	6,100	3,375	2,223	5,599	7,360	7,360
4.5.2-5	Number of farmers and others who have applied new technologies or management practices as a result of USG assistance	Number	New		0		1,866	404	2,270	9,220	0
			Continuing		0		12,278	3,465	15,743	15,740	24,960
			Male		0		10,734	2,891	13,625	19,220	19,220
			Female		0		3,410	978	4,389	5,740	5,740
			Total		0	19340	14,144	3,869	18,014	24,960	24,960
4.5.2-7	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	Number	Male		0		5,593	25	5,618	25,950	0
			Female		0		2,547	-	2,547	5,550	0
			Producers		0		5,860	25	5,885	30,750	0
			People in government		0		2,000	0	2,000	0	0
			People in private sector firms		0		280	0	280	750	0
			Total		0	12,000	8,140	25	8,165	31,500	0

ANNEX II: FTFMS AND PPR Q1'13 REPORT: PRICE BANGLADESH

Custom Indicators

Indicator No.	Indicator title	Unit	Disaggregated by:	Baseline		Q1'13 Target	Achieved to end of Q1'13			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	6,618,798	6,941,004	6,804,942	13,745,946	23,099,250	2,958,350
			Export	2011	81,866,821	7,210,959	769,689	7,789,500	8,559,189	28,351,100	5,876,500
			Aquaculture	2011	170,903,146	4,000,000	2,952,724	1,846,120	4,798,844	12,000,000	1,000,000
			Horticulture	2011	12,795,246	2,950,000	4,757,970	4,876,322	9,634,292	12,025,000	2,000,000
			Leather/Leather products	2011	0	6,879,757	0	7,872,000	7,872,000	27,425,350	5,834,850
			Total	2011	183,698,392	13,829,757	7,710,694	14,594,442	22,305,135	51,450,350	8,834,850
Custom	Number of Full-time equivalent Jobs Created	Number	Aquaculture		0	800	2,409	6	2,414	2,900	300
			Horticulture		0	1,100	366	86	452	2,900	1,000
			Leather/Leather products		0	270	0	150	150	870	0
			Male		0	1,506	2,536	91	2,627	4,610	975
			Female		0	664	239	151	389	2,060	325

Indicat or No.	Indicator title	Unit	Disaggregated by:	Baseline		Q1'13 Target	Achieved to end of Q1'13			FY13 Target	FY14 (Oct-Dec '13) Target
				Year	Value		FTF Zone	Non-FTF Zone	Total		
			Total		0	2,170	2,775	241	3,016	6,670	1,300
Custom	Total Value of Investment Increased	US \$ mill.	Aquaculture		0	400,000	52,756	261,381	314,137	1,300,000	0
			Horticulture		0	105,000	97,181	0	97,181	360,000	100,000
			Leather/Leather products		0	150,000	0	0	0	250,000	0
			Total		0	655,000	149,937	261,381	411,318	1,910,000	100,000
Custom	Number of persons participated in WF-dev prog	Number	Aquaculture		0	100	145	0	145	1,000	0
			Horticulture		0	1,600	0	0	0	5,700	0
			Leather/Leather products		0	700	0	222	222	2,800	0
			Male		0	1,060	145	20	165	4,200	0
			Female		0	1,340	0	202	202	5,300	0
			Total		0	2,400	145	222	367	9,500	0
Custom	Number of firms and farmers receiving USG assistance to access formal loan or micro- credit	Number	Aquaculture		0	100	58	36	94	500	0
			Horticulture		0	6,500	6,548	0	6,548	15,000	4,000
			Leather/Leather products		0	0	0	1	1	0	0
			Male		0	6,225	3,919	21	3,940	14,500	3,800

Indicat or No.	Indicator title	Unit	Disaggregated by:	Baseline		Q1'13 Target	Achieved to end of Q1'13			FY13 Target	FY14 (Oct-Dec '13) Target
				Year	Value		FTF Zone	Non-FTF Zone	Total		
			Female		0	375	2,687	16	2,703	1,000	200
			Total		0	6,600	6,606	37	6,643	15,500	4,000
Custom	Total value of sales increased of USG assisted businesses	US \$ mill.	Aquaculture	2011	91,582,790	800,000	728,398	541	728,939	2,400,000	200,000
			Horticulture	2011	3,633,647	600,000	1,860,663	2,543,234	4,403,896	1,900,000	500,000
			Total	2011	95,216,437	1,400,000	2,589,061	2,543,774	5,132,835	4,300,000	700,000

ANNEX III: PARTNER-WISE RESULTS

PARTNER-WISE RESULTS IN HORTICULTURE:

Region	Partner Type	Product	Partner	Sales Increased			No. Total Jobs Created			Investment Increased
				Domestic	Export	Total	Male	Female	Total	USD
				USD	USD	USD				
Bogra-Rajshahi	Enterprise	Potato	Gram Unnayan Karma Enterprise Development (GUKED)-1	423,043	0	423,043	22	-10	12	0
	Enterprise	Potato	Gram Unnayan Karma Enterprise Development (GUKED)-2	519,800	0	519,800	91	28	119	0
	Enterprise	Potato	Murail Rural Development Multipurpose Cooperative Society Ltd	42,609	0	42,609	6	6	12	0
	Enterprise	Potato	Murail Rural Development Multipurpose Cooperative Society Ltd-2	49,063	0	49,063	-5	-3	-8	0
	Farmer Group	Potato	Seed Potato Growers' Cooperative Society Ltd.	2,333,088	0	2,333,088	-158	0	-158	0
	Enterprise	Potato	Ferdous Biotech Ltd	130,615	0	130,615	5	0	5	0
	Enterprise	Potato	Bombay Sweets & Co Ltd	0	0	0	0	0	0	0
	Enterprise	Potato	Sajeeb Seeds	58,253	0	58,253	-0	0	-0	0
	Enterprise	Potato	Unique Seeds	80,764	0	80,764	7	0	7	0
	Enterprise	Potato	Technology For Rural Development (TFRD)	217,235	0	217,235	32	0	32	0
	Enterprise	Cross-	Grameen	53,406	0	53,406	39	1	39	0

Region	Partner Type	Product	Partner	Sales Increased			No. Total Jobs Created			Investment Increased
				Domestic	Export	Total	Male	Female	Total	USD
				USD	USD	USD				
		Cutting	Krishak Sohayak Sangstha Enterprise (GKSSE)							
	Enterprise	Cross-Cutting	Riya Fertilizer	18,444	0	18,444	4	0	4	0
	Enterprise	Cross-Cutting	Blue Moon International	950,000	0	950,000	22	0	22	0
Jessore-Khulna	Enterprise	Potato	Konika Seed Company Ltd	406,141	0	406,141	49	26	75	57,503
	Enterprise	Potato	Muktir Alo Agro Business-(Potato)	0	0	0	0	0	0	0
	Enterprise	Potato	Pride Agro Enterprise-(Potato)	11,929	0	11,929	-0	-0	-0	0
	Enterprise	Potato	Krishak Bandhu Karmashuchi-(Potato)	42,383	0	42,383	6	3	9	0
	Enterprise	Eggplant	Pride Agro Enterprise-(Eggplant)	7,762	0	7,762	3	0	3	1,029
	Enterprise	Eggplant	Krishak Bandhu Karmashuchi-(Eggplant)	56,066	0	56,066	4	1	4	319
	Farmer Group	Eggplant	Society Development Community (SDC)	182,873	0	182,873	19	0	19	2,721
	Farmer Group	Eggplant	Pride Agro Enterprise-Eggplant Farmers	580,706	0	580,706	58	6	64	23,341
	Farmer	Eggplant	Polly Prokrity-Eggplant	95,859	0	95,859	15	-0	15	128

Region	Partner Type	Product	Partner	Sales Increased			No. Total Jobs Created			Investment Increased
				Domestic	Export	Total	Male	Female	Total	USD
				USD	USD	USD				
	Group		Farmers							
	Farmer Group	Eggplant	Dipti Agro Enterprise-Eggplant Farmers	124,603	0	124,603	8	2	10	205
	Enterprise	Cross-Cutting	Padma Seeds	409,880	0	409,880	11	5	17	6,027
	Enterprise	Cross-Cutting	Biotech Agro complex	3,716	0	3,716	-4	1	-3	928
	Enterprise	Vegetables	Organix	0	0	0	0	0	0	0
	Enterprise	Vegetables	EFADF Agro Business	349,199	0	349,199	38	3	41	0
	Farmer Group	Vegetables	EFADF Agro Business-Vegetables Farmers	252,298	0	252,298	9	0	9	75
	Enterprise	Vegetables	Action In Development (AID) Agro Mart	0	0	0	0	0	0	0
	Enterprise	Vegetables	Renaissance	11,268	0	11,268	0	0	1	305
	Farmer Group	Vegetables	Renaissance Vegetable Farmers	970,119	0	970,119	63	0	63	903
	Farmer Group	Vegetables	Polly Prokrity-Chilli Farmers	87,314	0	87,314	3	19	22	407
	Farmer Group	Vegetables	Pride Agro Enterprise-Summer Tomato Farmers	342,619	0	342,619	35	-2	33	980
	Farmer Group	Vegetables	Jagoroni Agro Industries-Summer Tomato	150,512	0	150,512	15	-2	13	1,455

Region	Partner Type	Product	Partner	Sales Increased			No. Total Jobs Created			Investment Increased
				Domestic	Export	Total	Male	Female	Total	USD
				USD	USD	USD				
			Farmers							
	Farmer Group	Vegetables	Rural Reconstruction Foundation-Summer Totato Farmers	110,406	0	110,406	-25	-16	-41	285
	Enterprise	Cross-Cutting	Lalteer Seed Limited-2	562,319	0	562,319	8	2	11	0
			Total Horticulture	9,634,292	-	9,634,292	382	70	452	97,181

*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.

ANNEX III: PARTNER-WISE RESULTS

PARTNER-WISE RESULTS IN AQUACULTURE:

Partner-Wise Results in Fish

Partner Type	Partner	Sales Increased			No. Total Jobs Created			Investment Increased
		Domestic	Export	Total	Male	Female	Total	USD
		USD	USD	USD				
Enterprise	Nokla Motsojibi Somity	541	0	541	7	3	10	2,222
Farmer Group	Trinamool Manobik Unnayan Shongstha (TMUS)-2	-5,972	0	-5,972	-170	0	-170	26,958
Farmer Group	Kahaloo Matshya Chashi Samoby Samity-2	154,339	0	154,339	26	-0	26	5,640
Farmer Group	Society for Sustainable Development for the Rural & Urban Area (SSURDA)	310,334	0	310,334	239	0	239	24,407
Farmer Group	Talora Anchoalik Matsa Chasi Somobay Somity	152,193	0	152,193	10	-3	7	3,636
Farmer Group	Rakhaing Development Foundation (RDF)- 2	807,448	0	807,448	-166	0	-166	143,396
Farmer Group	Barisal Aquaculture Development Society	115,292	0	115,292	15	2	17	10,908
Farmer Group	Center for Integrated Social Development (CISD)	162,998	0	162,998	19	-2	16	9,774
Farmer Group	Bangladesh Cage Culture Owners Association (BCOA)	148,948	0	148,948	26	0	26	34,439
Farmer Group	Mulia Matshyajibi Samittee	153,030	0	153,030	45	1	46	3,830
Farmer Group	Goldhamari Motshojibi Samabay Somity	102,477	0	102,477	58	3	60	6,272
Enterprise	South Bay (Pvt) Ltd	58,951	0	58,951	0	0	0	0

Enterprise	Nowapara Fisheries Complex	6,272	0	6,272	-13	-1	-15	0
Farmer Group	South Bay (Pvt) Ltd-Farmers	160,968	0	160,968	-17	1	-16	2,790
Farmer Group	Nowapara Fisheries Complex-Farmers	270,272	0	270,272	74	8	81	5,660
Farmer Group	Chittra Unnayan Kendra-Farmers	182,208	0	182,208	49	3	52	7,058
Farmer Group	Banchte Shekha-Farmers	300,322	0	300,322	107	1	108	12,483
Farmer Group	Shushilan (Aqua)-Farmers	167,466	0	167,466	29	23	52	8,946
Enterprise	SMS Feeds Ltd.	873,457	0	873,457	51	12	63	0
	Total Fish	4,121,541	-	4,121,541	389	49	438	308,420

* 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.

ANNEX III: PARTNER-WISE RESULTS

Partner-Wise Results in Shrimp

	Partner Type	Partner	Sales Increased			No. Total Jobs Created			Investment Increased
			Domestic	Export	Total	Male	Female	Total	USD
			USD	USD	USD				
Jessore-Khulna	Enterprise	Gazi Fish Culture Ltd	0	176,416	176,416	-2	7	5	1,235
	Enterprise	S M Shrimp Culture	0	3,966	3,966	18	0	18	0
	Enterprise	GHERS-1 by The WorldFish Center	420,036	-357,698	62,338	290	-67	223	459
	Enterprise	GHERS-2 -2010 by The WorldFish Center	-453,037	-68,240	-521,277	328	13	342	1,313
	Enterprise	GHERS-2 2011 by The WorldFish Center	-219,150	287,426	68,276	730	126	856	2,334
	Farmer Group	GHERS-3-Farmers 2012 by The WorldFish Center	159,765	727,818	887,583	472	61	533	377
		Total Shrimp	(92,387)	769,689	677,303	1,836	141	1,977	5,718

Source of data: Partner interviews for enterprises and WF for GHERS data.

ANNEX III: PARTNER-WISE RESULTS

PARTNER-WISE RESULTS IN LEATHER PRODUCTS:

Region	Partner	Sales Increased			No. Total Jobs Created			Investment Increased
		Domestic	Export	Total	Male	Female	Total	USD
		USD	USD	USD				
Dhaka	LFMEAB - Apex Adelchi Footwear Ltd.	-	1,976,250	1,976,250	0	0	0	0
	LFMEAB - Bay Footwear Ltd.	-	252,000	252,000	-	-	-	-
	LFMEAB - Jennys Shoes Ltd	-	94,500	94,500	-	-	-	-
	LFMEAB - Landmark Footwear Ltd	-	405,000	405,000	-	-	-	-
	LFMEAB - Apex Leather Craft Fashion & Accessories	-	195,000	195,000	-	-	-	-
	LFMEAB - PICARD	-	535,500	535,500	-	-	-	-
	LFMEAB - Bengal Shoe Industries	-	1,620,000	1,620,000	20	130	150	-
	LFMEAB - FB Footwear Ltd	-	1,800,000	1,800,000	0	0	0	-
	Leather Technologist SME Entrepreneur (LTSE)	82,500	-	82,500	-	-	-	-
	COEL	-	911,250	911,250	-	-	-	-
	Total Leather Products	82,500	7,789,500	7,872,000	20	130	150	0

Source of data: Partner interviews

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