



STORIES OF CHANGE

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Concept:
Communications Unit, Katalyst

Text:
Farida Husain, Odyssey Consulting

Design:
ZANALA Bangladesh

Coordination:
Nadia Iqbal, Katalyst

Contributors from Katalyst:

Abu Saif Ansari
Ahlam Hossain
Ashapurna Das
Christoph Neusiedl
Faiza Alam
Jannat Adib Chowdhury
Mahmud Zaman
Mehedi Hasan
Md. Shawkat Ali
Saqif Nayeem Khan
Sanchita Sarkar
Shamminaz Polen
Sharmin Ahmed
Tahsin Akbar
Tamjid Ahmed

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FOREWORD

Bangladesh aspires to be a middle-income country by 2021 with impressive economic growth and development. The agriculture sector, employing nearly half of the population, is clearly going to be a crucial contributing factor in achieving this ambitious goal.

When farmers prosper, efforts to end poverty and hunger are enhanced. When they are able to reap bigger harvests, farmers pull themselves and their families out of poverty, and they provide food surpluses for their communities and beyond.

However, farmers routinely face stiff challenges and obstacles that hinder them to realize their full potential. Katalyst's mission is to better integrate those farmers in the markets by providing them with better access to quality inputs, services, information, knowledge and products. Katalyst identifies the barriers to farmers' successful participation in the markets and finds practical solutions to mitigate these difficulties. This is done in an

active, ongoing partnership with both the public and private sectors. This booklet describes some recent, stand-out innovations and achievements that are the fruits of this future-oriented partnership, fully supported by Katalyst.

As Katalyst is in its third phase of operations, we review some of the milestone achievements of the project. We also expect to expand on these successful models to be implemented throughout Bangladesh. This would steadily increase the number of farmers who can be fully integrated into the markets, thereby lifting themselves out of poverty.

We hope this booklet serves to inform and inspire others to learn from these illuminating examples. It should help them to develop more innovative ideas that bring about enduring changes in the lives of rural farmers across Bangladesh, leading to genuinely inclusive economic growth, and reduced poverty on the path to become a middle-income country.



Markus Ehmann
General Manager
Katalyst



Nasir Uddin Ahmed
Head of Capitalisation, Communications
and External Relations
Katalyst





KRISHIBID INSTITUTION, BANGLADESH (KIB) ANNOUNCES AGRICULTURE AWARD TO PROMOTE INNOVATIONS AND GOOD PRACTICES

- Sharing of knowledge and experiences to adopt more inclusive business initiatives for poverty reduction.

Since 2003, Katalyst has been working in Bangladesh implementing inclusive agribusiness initiatives to reduce poverty. After over a decade of extensive experience on the ground, the project is now adept at identifying strategies that work, and discarding those that don't, in market development programmes. However, since this project's full implementation is subject to completion within a stipulated number of years, Katalyst cannot alone effect enduring, pro-poor innovations in the markets. It needs informed and involved partners in this endeavour. So, Katalyst must:

- 1) create the necessary awareness among a range of stakeholders on inclusive business approaches and
- 2 encourage them to incorporate more inclusive development practices into their existing and projected plans toward measurable, meaningful poverty reduction.

In making a compelling case to their partners for adopting more pro-poor and inclusive agribusiness initiatives, Katalyst supported Krishibid Institution, Bangladesh (KIB) in the decision to initiate an award acknowledging their contributions in promoting inclusive development in the agricultural sector of Bangladesh.

KIB is the only organization representing the agriculturists in Bangladesh. It has 25,000+ members involved in various sub-sectors of agriculture. It has made marked contributions to the growth and development of the agricultural sector in Bangladesh. KIB has the proven capacity, access and reliability to provide the support required to help partners and incentivise their efforts through this award.

A 7-member jury was formed comprising of reputed agriculturists, academicians, development professionals and economists.

The award categories include: Best Agricultural Organisation, Agricultural Personality of the year, Agriculturalist, Innovative/ Successful farmer, Agricultural Enterprise/ Entrepreneur, Female in agriculture, Media in agriculture – Individual/Organisation.

The first award-giving ceremony was arranged in February 2015. President Md. Abdul Hamid as chief guest, and Minister of Agriculture, State Minister for Fisheries and

Livestock, several Members of Parliament (MPs) were also present at the award ceremony.

The award has received an enthusiastic endorsement, in both the print and broadcast media for its role in informing and encouraging the key stakeholders in the agricultural sector to a greater degree than before. Catalyst will continue to support KIB in building their capacity to sustain this initiative.



QUALITY SEED IN MINI-PACKS – ONE OF THE GREATEST INNOVATIONS FOR SMALL AND MARGINAL FARMERS

- Appropriately sizing and pricing of quality seed packets has checked adulteration and unreliable services by distributors, retailers and vendors.

Most farmers are unaware of the benefits of using quality seed; so they either use deteriorated seed from the previous harvest seasons or actually purchase patently poor quality seed and get predictably very low yields. Farmers also tell of not using quality seed because they came in large packets and thus cost more. What farmers needed was good quality seed in small packs. Retailers selling smaller quantities of seed taken from the large packet led to adulteration, with inferior seed being put inside the quality packets. Besides, the seed companies in Bangladesh mostly catered to medium to large-scale farmers and were reluctant to include small and marginal farmers who lack awareness, access and purchasing power.

In 2011, Lal Teer, Katalyst's first partner company introduced quality seed in small, affordable 'mini-pack' sizes for small and marginal farmers. The mini-packets were available for 35 varieties of hybrid (USD0.25/pack) and

open pollinated (USD0.03/pack) vegetables. This had instantly impacted the lives of hundreds of thousands of poor farmers in 55 of the 64 districts across Bangladesh. Encouraged by the resounding success of Lal Teer, more companies opted to selling their seed in mini-packs to bridge the widening demand-supply gap of the small and marginal farmers. The companies were fast convinced of the fact that appropriately sizing and pricing of their seed packets had visibly reduced adulteration by distributors, retailers and vendors.

Lal Teer vastly overshot its target of selling 100,000 mini-packets during the pilot phase in 2011, to 558,000 packets. Lal Teer more than doubled that feat by selling 1.3 million packs in 2012. The number of households using mini-packets swelled from 236,000 to 339,000 and to 458,000 in three subsequent seasons in 2012. The repeat buyers increased by 41% and more remarkably, 90% farmers consumed their own produce grown from the mini-

packets. 40% of farmers (among them were over 100,000 female farmers) used the mini packets in home gardens. Katalyst won the 2014 OECD Development Assistance Committee (DAC) Prize for Taking Development Innovation to Scale with 2.36 million farmers and enterprises being direct beneficiaries of a cumulative increase in incomes by USD 296 million.

Katalyst plans to provide further technical support to companies in marketing and distributing seed mini-packs in the isolated chars of Bangladesh. Katalyst will also work with the farmer organisations and service providers to improve farmers' knowledge in sowing and cultivation techniques.



LINKAGES WITH INTERNATIONAL BROOD COMPANIES HAVE SIGNIFICANTLY ENHANCED BANGLADESHI FISH FARMING PRACTICES

- High quality fingerlings have low mortality and high growth, resulting in higher incomes and profits for farmers.

Fish farmers in Bangladesh lack knowledge of advanced culturing techniques of profitable fish species. They also lack access to good quality inputs to do so. A hatchery study in 2009 showed that, good quality brood fishes were not nurtured by hatcheries and thus were hard to find in Bangladesh. Moreover, most hatcheries also had very limited technical 'know-how' and skills of culturing high value species of fish. This dearth of knowledge and expertise has stunted the growth of the fish industry in Bangladesh. The consequence of this has been diminished incomes and prospects for local fish farmers. So, the feed manufacturers, aqua chemical companies and hatcheries were identified as good entry points to reach and help farmers to overcome these impediments.

During 2008-13, Katalyst established links between 15 regional hatcheries and International, accredited brood companies in Vietnam and

Philippines to ensure a good supply of high quality fish fingerlings of different profitable fish species to the farmers. Efforts were made to equip these hatcheries with the capacity to build and better manage their infrastructure and the quality of the imported brood. Starting in early-2011, the hatchery-international brood company linkage was strengthened by creating regional hatchery associations associated with one National Hatchery Association. This is to ensure that these import links were made sustainable and managed through a system endorsed by the Department of Fisheries.

A new central hatchery association was formed from the Mymensingh regional association with representation from Mymensingh, Bogra, Comilla, Jessore and Chittagong to facilitate sustainable brood import. The 15 hatcheries later expanded their businesses via this strengthened, existing linkage with the international



brood suppliers. Moreover, 38 new hatcheries started importing brood fish. Department of Fisheries had also issued a guideline for the association for improved monitoring and evaluation of imported broods.

An impact assessment conducted in January 2015 showed that 22,000 fish farmers benefitted from culturing the Vietnamese Koi, Tilapia and Pangas. This was possible due to the availability of

quality fingerlings of high-value fish species in the market. With ever greater availability, expectations are that input companies and hatcheries will more successfully promote the use of quality inputs and better farming practices to small farmers.

By 2017, Katalyst aims to help around 200,000 more fish farmers to increase their incomes and profits, using superior inputs and culturing high value fish species.





MAIZE CONTRACT FARMING – A WIN-WIN SCENARIO FOR FARMERS AND CONTRACTORS

- Quality inputs; a dedicated credit line for contractors with technical know-how and buy-back guarantees for farmers are boosting farmers' incomes and domestic production of maize.

Farmers in the char areas (riverine islands) are getting lower yields due to a dearth of knowledge and information on the best cultivation techniques. Moreover, quality inputs are scarce; and, even when farmers are able to avail of some of these inputs, few among them either know the correct usage or seldom have enough cash in hand to buy them.

Katalyst introduced and supported maize contract farming whereby contractors would provide farmers with good quality inputs, technical knowledge for maize cultivation and a buy-back guarantee. During 2009-11, the work of eight contractors with such farmers showed promising results. In two years, the yield, productivity and the total number of farmers engaged in contract farming had all increased significantly.

Spurred by this initial success, Katalyst partnered with Charoen Pokphand (CP), an international agro company to develop a sub-

contracting system for selling quality inputs to contractors, promoting good farming practices and offering buy-back guarantees. Katalyst also supported Agrani Bank and National Credit and Commerce (NCC) Bank to design and launch a Dedicated Credit Line (DCL) for lending to contractors. By 2013, 55 contractors were collaborating with CP in northern Bangladesh and reaching out to 8,000 farmers, most of whom lived in the chars.

An independent study by Wageningen University, Netherlands showed that the contract farming approach has increased maize production from 5.50 MT to 7.50MT/hectare each season. It has also raised the incomes of char farmers by over 50%- from BDT15,500/acre to BDT23,500/acre in northern Bangladesh.

Assessing this visible success, Bangladesh Bank (BB) identified maize production as a priority for future investment. BB also

endorsed contract-farming system as a viable means of Agricultural Loan Disbursement for financial institutions in its Agricultural/Rural Credit Policy and Programme for the FY 2010-11. In 2015, there are currently 65 contractors and 10,000+ contract farmers with increased incomes under CP contract farming system.

By 2017, Katalyst estimates 600,000 farmers will be earning higher incomes through maize cultivation doing contract farming. This will increase domestic production and reduce imports. Besides, these farmers will also gain in competitiveness through higher productivity and greater market access.



FARMERS ARE TUNING INTO COMMUNITY RADIOS FOR AGRICULTURAL INFORMATION

- A reliable and interactive source of agriculture information in the farming communities.

The advent of 'Community radios', in 2010, as a specialized media channel catering specifically to the information and entertainment demands of the rural population has clearly been a positive development. A key feature of Community Radio is its adaptability in consistently creating programmes with region-specific content. Community radio delivers information with a strong local relevance and in a local dialect that is readily accessible to its listeners. Also, since it can be tuned in using mobile phones from anywhere in the area, community radio's use and popularity have soared.

Sixteen licensed community radio stations are currently operating throughout Bangladesh. Each of these stations has a coverage range extending to a 17km radius. The government intends to extend this up to 25km. An additional 18 licensed radio stations, set up late last year, are ready to begin operations, soon.

The 16 operating stations broadcast programmes on agriculture, health, gender and other livelihood-related issues, serving a population of one million farming households, primarily smallholder farmers. A content analysis commissioned by Katalyst in 2014, revealed that the structure and quality of the radio programming needed improvement in terms of airing more relevant information, timely dissemination, and increased audience participation.

Katalyst began collaborative activities with 9 selected community radio stations regions where there were a large number of farmers engaged in Katalyst's activities. Katalyst worked to improve the quality of agro-programmes aired on these stations, by making them more innovative, interactive, entertaining and informative. Over 40 meetings with male and female farmer groups were held to identify farmers' core interests and information demands in order to include them in the programmes.



Katalyst is also collaborating with government agencies to help these stations make qualitative improvements in the content of their agro-programmes.

Additionally, the senior management and agro programme production teams of these stations were provided training by a radio agro-programme expert on producing better quality farmer-centric programmes. The 5-day long

Training of Trainers (ToT) session was organised in partnership with the Agriculture Information Services (AIS). The executives and staff of community radio stations were also trained by a marketing specialist from a leading media buying agency to develop their marketing skills to promote these programmes to local and national sponsors.

TRADERS' ASSOCIATIONS ARE SUCCESSFULLY BRIDGING THE GAP BETWEEN FARMER GROUPS AND EXTENSION OFFICERS

- Public extension departments are collaborating with the private sector to deliver useful, timely information and services to the farmers.

Bangladesh is a predominantly agricultural country where 25 million farm households rely on agriculture as their main source of income. Efficient means of farming and access to proper public extension services is a crucial element determining their livelihoods. Owing to limited human resources, supply-driven national extension programmes and non-agricultural involvement of field staff (e.g. engaged in voter listing, election duty etc.) of the extension department makes it very difficult for them to provide relevant and useful information and services to the farmers. To solve this problem, Katalyst created a network of traders and farmers, which it then promoted to the sub-district level agricultural extension departments. The aim is to guarantee a more seamless, reliable, timely flow of relevant information and services from the extension service providers to a large number of farmers who need it most.

Katalyst linked farmers' groups created by other government projects, NGOs or self organized groups with suitable Traders' Associations. The trader associations are established organizations, dealing in agricultural inputs and output traders. Furthermore, the traders' association was provided with training on organizational development, management, advocacy and gender mainstreaming aimed at ensuring a clear, direct, interactive line of communication between the farmer groups and the extension service providers.

In early 2013, a review by a government task force of the 116 sub-districts resulted in the publishing of a guideline by the central extension department. This guideline was distributed in all the 116 sub-districts urging the utilisation of the network for disseminating useful information and providing essential services. The traders' associations have

been participants in the training of farmers by the extension agencies and private companies. The main focus of these trainings was on the transfer of key knowledge and techniques to the farmers of diverse agricultural issues of interest to them.

By 2013, 4,200 farmer groups with around 210,000 farmers in 116 sub-districts were shown to be either

direct or indirect beneficiaries of the trainings, and the provision of information and services. As of early-2015, around 3,000 farmer groups comprising of 100,000 farmers in 112 sub-districts are part of this network, receiving regular information and services. An additional 68 sub-districts will be incorporated into this network in the near future.







PROMOTION OF PRIVATE PROCUREMENT CHANNEL FOR SAFE AGRICULTURAL PRODUCTS

- Proper harvesting, collection, preservation and packaging techniques lowered the production costs, reduced post-harvest wastage and ensured fair market value for farmers and traders.

An assessment report in 2006 revealed that typical post-harvest losses in fruits and vegetables in Bangladesh are estimated at 20-25%. For highly perishable items, losses are higher at 40%. In fishes, it is estimated to be 10%. Moreover, food adulteration has proliferated over the last decade. According to the National Food Safety Laboratory and Bangladesh Food Research Institute, some farmers and traders unscrupulously use toxic chemicals such as calcium carbide for ripening fruits and formalin, aldrin and ethion to preserve fruits, vegetables and fish at the post-harvest stage.

In early 2014, ACI Cropex, backed by Katalyst, had developed a unique business model that spurred value-chain players to adopt superior practices in the post-production industry activities. A key element of this model was the development of a training module on “Modern Post-harvest Management Practices” for products selected

by Cropex i.e. Mango and Fish for trading.

The first two training modules were intended to instill the necessary skills in the mango farmers and traders to be reliable suppliers of ACI Cropex in selling mangoes free of chemical contamination.

This training exercise received an enthusiastic response. Following their success with mangoes, the company repeated an identical training module for fish farmers and traders. These training initiatives taught the farmers and traders the appropriate harvesting, collection, preservation, and packaging techniques. ACI Cropex leased a wholesale point at Kawran Bazar and supplied fish to reputed hotels, restaurants, hospitals, retailers and corporate houses. It plans to expand its reach to urban household consumers.

This model provided the marginal and smallholder farmers greater access to the urban markets. It



also reinforced the lessons to farmers and traders in the obvious advantages of following prudent production, harvest and post-harvest practices. These safe practices helped lower production costs, cut post-harvest wastage and ensured a fair market value for farmers and traders of ACI Cropex. Also, the company's fair

procurement practices guaranteed that poor and smallholder farmers received a fair market value, in cash, for their produce.

By 2017, Katalyst expects more private companies entering the agricultural commodity-trading market and expanding efficiency throughout the value chain.

INTEGRATED PEST MANAGEMENT (IPM) – A MORE EFFECTIVE, CHEAPER, ENVIRONMENTALLY-FRIENDLY TOOL FOR FARMERS

- Farmers are earning more from high-yield crops, while protecting good soil health.

Approximately 20% of the total agricultural production in Bangladesh is lost in pest attacks. To combat and control pests, farmers only use chemical pesticides. And that too, in insufficient dosages, compounding the environmental hazards to both crops and land. In a study conducted in October 2009 showed that farmers wanted far cheaper but more effective pesticides to minimise their losses and protect their earnings. Integrated pest management (IPM) offers a spectrum of pest control methods that include pheromone trap of beneficial insects (which kill other harmful insects), costs less and benefits crop yields and soil health.

Katalyst spearheaded the amendment of “The Pesticides Rule 1985” by preparing a policy recommendation paper. The old Pesticide Act lacked a provision for licensing of any ‘Bio-pesticide’. The amendment to the Act, in 2012, now allowed private/commercial companies to apply for and receive licensing for producing

environmentally-friendly Bio-pesticides.

Two companies received licenses to produce IPM products. Conforming to the norms of Department of Agriculture Extension, Katalyst supported Ispahani Biotech and GME Agro Ltd. in promoting the benefits of using IPM products to the small and marginal farmers in Comilla, Jessore, Mymensingh, Rangpur, Dinajpur and Bogra regions through demonstrations, SAAO and Dealer–Retailer Training.

Following the example of Ispahani Biotech and GME Agro, other companies such as ACI Agrochemicals and SNS Agro Tech are now producing IPM products to meet growing demand. Katalyst is working to expedite the registration procedures for IPM products, to make it more easily available to the farmers.

By the end of 2012, 17,000 farmers used IPM technologies that were soil and crop friendly as

well as cost-effective. The cost of production had decreased by BDT5 per decimal and the crop yield had increased by 22kg per decimal due to less damage by pests' attack. By 2014, 47,000 farmers had increased profits of BDT4,500 per farmer. More and more farmers now express relief and satisfaction in the availability of greater, better options in pest control at their disposal. This includes the safe, reliable, effective use of pesticides.

By 2017, Katalyst expects to expand outreach to an additional 80,000 farmers and help them increase their incomes via greater use of IPM products.



TRICHODERMA- ENHANCED COMPOSTING TECHNOLOGY IS THE MOST EFFICIENT, LOW COST AND SIMPLE TECHNOLOGY FOR FARMERS

-Trichoderma is the fastest de-composting agent that protects soil health and results in higher crop yields.

A balanced application of the right fertilizers is critical for ensuring higher yields and preserving soil health. Though many farmers in Bangladesh produce compost at a homestead level, the process is painstakingly slow and inefficient owing to the long decomposition period. And the quality of the compost is inferior due to the poor quality of raw materials used.

Many farmers are also unaware of the many benefits of good compost and continue to use costly chemical fertilizers which only increase their overall production costs. On the other hand, compost manufacturers are also deterred from opting for commercial production due to the stringent licensing procedures. Hence, farmers are currently using excessive amounts of chemical fertilizers and far less of organic compost. This is continuing to cause massive deterioration in soil fertility and incurring a lasting negative impact on national food security.

Trichoderma, a soil-borne beneficial fungus, significantly lessens the time of the decomposition process of organic materials from 3-4 months to only 4-5 weeks. It also improves soil health by increasing its water retention capacity resulting in better crop yield. It acts as a biopesticide agent in the soil helping plants grow greater resistance to fungal diseases; a resilience that is a boon in disaster-prone areas. Trichoderma suppresses several pathogenic fungi that cause wilts, damping off, leaf blights and spots in plants.

In partnership with the Rural Development Academy (RDA), Katalyst has set up a trichoderma lab in Bogra. Many farmers' meetings, demonstration pits, field days and demonstration plots were set up in collaboration with Ispahani Agro Limited and RDA to grow awareness among the homestead farmers. Farmers were also made aware to increase their capacity to produce quality trichocompost for use in their crop fields.



An added advantage is that of fewer environmental hazards and lower production costs for farmers resulting in higher incomes, since most raw materials used for producing tricho-compost are cow-dung, kitchen wastes and poultry litter.

Presently, RDA produces and supplies 200 litres of trichoderma, each month, to homestead farmers and institutional buyers like small/medium compost producers who are their regular customers.

Some farmers have taken commendable personal initiatives.

For example, Mr. Rafiqul Islam has four trichocompost pits producing 4000kg per month for his own and other farmers' use. Another farmer, Mr. Saliqul Islam, produces 4 tonnes per month and supplies it to his farmers' base of 90 farmers and to institutional buyers in Rangpur and Jessore. During 2008-2013, around 1,000 farmers saw their incomes increase by BDT 3,000 each/year.

During 2013-17, an additional 20,000 farmers are expected to be producing and using their own tricho-compost.

WOMEN WITH EASY ACCESS TO INFORMATION, SERVICES AND FINANCE ENJOY GREATER ECONOMIC OPPORTUNITIES AND DECISION-MAKING AUTHORITY

- Women are equal partners in actions and decisions affecting the family, community and society.

Gender mainstreaming has been an important theme for the project since 2009. In 2013, this effort culminated in the establishing of the Women's Economic Empowerment (WEE) with a coherent vision and strategy. Katalyst understands WEE as women's equal access to quality inputs, information services, markets and finance and as all these being a precursor to women's improved economic opportunities and greater decision-making authority. It is believed that women with equal access to economic opportunities as men will also become successful farmers and entrepreneurs who are sufficiently solvent, self-reliant, and better able to support their families and contribute to the overall economy of the country.

However, to date, the inclusion of women in commercial agricultural production in rural Bangladesh is neither optimally utilized nor properly recognised. To involve

greater numbers of women in agricultural activities, especially in farmed fish cultivation during November 2014- April 2015, 11 hatchery owners had provided 22 trainings to 740 female farmers. These trainings enhanced the farming knowledge of women, who are already heavily involved in fish culture activities such as feeding particularly in culturing high-value fish species.

WEE also proactively seeks opportunities to engage with stakeholders like other development organizations, private companies, associations and government agencies to establish an ongoing dialogue with them on the issues greater inclusion and economic empowerment of women in commercial agriculture in Bangladesh.

In the first of these conversations among partners, at the end of 2014, WEE held a roundtable to discuss the 'Challenges and Opportunities

for Rural Women' and their proper integration into the Agricultural Value Chains. Also, of sharing experiences in achieving women's economic empowerment, their roles in market development and other rural and/or agricultural value chain development programmes.

It is hoped that a serious dialogue between WEE and other stakeholders will continue to generate new ways of strengthening and integrating women's productive role in society. Future conversations will engage NGO partners, the public sector, business associations and the donor network.







Katalyst Project Office:

House 20, Road 6, Baridhara, Dhaka 1212, Bangladesh

Phone: +88 (02) 8833172-4, Fax: +88 (02) 8835452

www.katalyst.com.bd, www.facebook.com/katalyst.swisscontact

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