



Cereal Systems Initiative for South Asia in Bangladesh (CSISA-BD)

## Life-Changing Stories of Successful Women Farmers



### **Mainstreaming gender in CSISA-BD project**

The Cereal Systems Initiative for South Asia in Bangladesh (CSISA-BD) project aims to test and disseminate new cereal system-based technologies that will raise family income by at least US\$350 for 60,000 farming families. It is anticipated that a further 300,000 farmers will adopt new technologies by participating in field days and farmer-to-farmer information and technology transfer. CSISA-BD is implemented through a partnership between three CGIAR centers: IRRI, CIMMYT and WorldFish. CSISA-BD is funded by USAID's Feed the Future (FtF) initiative.

CSISA-BD aims to mainstream women's participation in order to reduce the gender gap by enabling women and men farmers to innovate and adopt improved technologies. The CSISA-BD project has been working to ensure that 1) both men and women farmers are involved in the technology adoption and innovation process, 2) both men and women farmers have better access to benefits and services from CSISA-BD networks and partnerships, and suitable technologies and practices. Moreover, CSISA-BD is designed to target women farmers in specific agricultural activities that will increase their production and income levels, and the diversity of the food types consumed.

CSISA-BD provides women farmers with support through the following activities:

**Participatory farmer trials and adaptive trials:** In year three of the CSISA-BD project, there have been 3,092 woman farmers that participated in project-sponsored adaptive trials or technology demonstrations. In addition, more than 95,000 woman farmers received seed of new rice varieties through the SRSPDS sub-project under CSISA-BD.

**Short-term agricultural sector productivity or food security training:** CSISA-BD has provided short-term training directly and indirectly to 22,582 women farmers. A total of 8,977 women farmers have received direct training support and 13,583 woman farmers have had exposure to new varieties and technologies through farmers field days and cross farm visits.



**Anindita Mollik**

**“We never thought wheat production was possible on our saline land; we observed it and finally I produced it by myself. We are very happy; all Shovna farmers are happy.”**

# Anindita Mollik

## Strip tillage with residue on wheat changed her life

*Training on wheat's new technologies through CIMMYT CSISA-BD are helping farmers in Barisal to overcome poverty and secure their livelihoods.*



*"We never thought wheat production was possible on our saline land; we observed it and finally I produced it by myself. We are very happy."*

*Anindita Mollik, CSISA-BD wheat farmer, Khulna*

*Story: Drs. Md. Shahjahan, Rosa Cossio and Frederick Rossi*

*Photo: Dr. Md. Shahjahan, CIMMYT*

Farmers of Shovna Village (Khulna District) are among the poorest in the district, and they are becoming poorer due to increasing salinity of the soil. During the dry season, farmers cannot grow any crops on their land as soil salinity reaches up to 15 ds/m. More than 1000 ha of land remain fallow during the Rabi season – two years ago this land began to look whitish in color because of high salinity levels.

As part of the USAID-funded CSISA-BD project, CIMMYT began working in Shovna in 2011–12 in order to address some of their issues. CIMMYT conducted whole family training (WFT) on best practices for wheat production through conservation agriculture, and implemented adaptive trials featuring the new wheat variety BARI Gom25 in a strip tillage system with rice residue. The yield of the plot was an impressive 3.85 t/ha; Shovna farmers were amazed to see the results of the trial because they never thought that wheat cultivation was possible on such saline soils. Indeed, it represented a great opportunity for them to increase their income by adding a second crop to the sole Aman rice crop they had always grown.

Anindita Mollik and her husband Subash were among the poorest farmers in Shovna before 2012. At that time, they were unemployed and could not provide enough food for their family or school uniforms and materials for their children. However Anindita's life improved dramatically after CIMMYT's 2012 WFT on wheat production; and after she observed the results of the adaptive trial on wheat in salinity-affected land. She was inspired to produce wheat by strip tillage with residue retention.

Anindita contacted CIMMYT staff and following their advice, she sowed wheat on her 50 decimals of land. Different farmers visited her and were impressed with her work. At the time of harvesting (after following CIMMYT's standardized procedures for the trial and receiving frequent supervision), Anindita obtained a yield of 4.01 t/ha – a remarkable result for land that had not produced any crop in the past. Anindita and her husband were very pleased with the results. They sold most of the wheat at the market and reserved 50 kg of it to be used as seed for the following year. Anindita was able to buy school uniforms for her daughters and other necessary materials. Her successful wheat production inspired and encouraged other farmers in the area. Effectively she established a new successful cropping system (rice-wheat-fallow) for the Shovna area. Anindita's story proved that efficient management of the soil, especially by using reduced tillage, is an effective way of increasing wheat production and helping people to climb out of poverty.



**Mahfuza Rahman**

**"My husband initially did not really trust my ability but now he is very delighted in seeing my efforts and outcomes."**

# Mahfuza's New found respect from family and community

*Mahfuza transformed her underutilized homestead pond and dike into a productive and profitable farm. Now her husband and the community see her with new respect.*



*"My husband initially did not really trust my ability but now he is very delighted in seeing my efforts and outcomes."*

*Mahfuza Rahman, CSISA-BD fish farmer, Faridpur*

*Story: Rupan Kumar Basak, Md. Ershadul Islam and Afrina Choudhury*

*Photo: Rupan Kumar Basak, WorldFish*

"I had never been seen as an income earner; rather, I was thought to be a person who loves to look after her family, cook food, and take care of livestock, which amounted to my prime responsibilities," says Mahfuza Rahman, a farmer from Akain village in Faridpur district. "Now I feel proud of my success in aquaculture and vegetable production in my homestead and pond dike."

Mahfuza's story began when she met with WorldFish staff working in her village for the USAID funded Cereal Systems Initiative for South Asia in Bangladesh (CSISA-BD) project in 2012. The project was offering training on household based pond aquaculture and vegetable farming for homestead gardens and pond dikes. Knowing she had the resources within her reach, Mahfuza was interested to receive training from the project to help improve the productivity of the 15 decimal pond attached to her homestead.

Mahfuza's husband engages in other agricultural activities and paint-related work in the town. He accepted her desire to improve the productivity of their homestead pond, but with some skepticism. "My husband initially did not really trust my ability, but now he is very delighted in seeing my efforts and outcomes," she explains. With his support, she registered with the CSISA-BD project and began attending training sessions with 24 women from her village.

During the training she learned new farming and pond management techniques including the importance of producing nutrient rich foods, such as orange sweet potato and mola, a nutritious small fish. The women learned how to cultivate mola together with carp, and how to grow orange sweet potato with a wide range of other vegetables along the banks of their ponds.

After applying these new technologies for 10 months, with the help of her husband (who mainly supported her with finance, input access and marketing), Mahfuza produced 223kg of carp and 26kg of mola. The yield was enough to both feed her family of five and fetch BDT15,700 (USD \$204) in sales at the local market.

"I never got more than 165kg fish from this pond for the last 5 years, but she almost doubled the production within a year," says Mahfuza's husband, Mr. Ershadur Rahman. "In the past, we had to consume fish irregularly, maximum once a week, and that too was mainly bought from the local market. However, this year, the culture of mola in pond facilitated frequent consumption from our own pond," he adds.

Mahfuza's involvement in a nontraditional job outside of her role as a housewife helped to boost her confidence and her husband's belief in her.

"Despite my impressive success, my husband wouldn't allow me to join a workshop alone in the district and accompanied me," explains Mahfuza. "However, when I explained my experience with full proficiency to an audience of about 150 in a Farmer Field Day, he became very impressed. Since then, he never insists on accompanying me to any meetings or workshops," she says.

Mahfuza's success has been recognized throughout the community, and many people, especially women, often come to her and request her support.

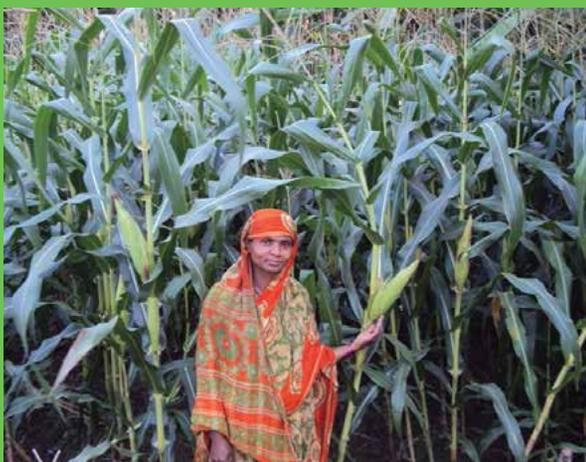


**Aklima Begum**

**"I was mesmerized to see such a robust maize crop in my fallow land... it never came to my mind that such nice production of maize was even possible in this area... I had never seen."**

# Aklima Begum is happy to produce maize

*Through CSISA-BD, CIMMYT has introduced maize to fallow lands during Rabi season, thus contributing to poverty alleviation and food security.*



*"I was mesmerized to see such a robust maize crop in my fallow land... it never came to my mind that such nice production of maize was even possible in this area... I had never seen."*

*Aklima Begum, CSISA-BD maize farmer, Barisal*

*Story: Drs. Samina Yasmin, Rosa Cossio and Frederick Rossi*

*Photo: Dr. Samina Yasmin, CIMMYT*

Aklima Begum is a housewife in Kumrakhali Village in Barguna District, and she is a member of the Kumrakhali Maize Production Group. She has 22 decimal of fallow land in front of her house, which is surrounded by shade trees. Before receiving support from CIMMYT through the USAID-funded CSISA-BD project, Aklima thought her fallow land would not support any type of crop in the Rabi season. A field facilitator from the Social Advancement Community Organization (SACO), a CIMMYT-CSISA partner, encouraged her to produce maize on her fallow land. However, Aklima did not have any knowledge about the production of maize and its benefits, so she had initial doubts about it. In 2012, after participation in CIMMYT's one-day training on maize production, her interest in the crop grew rapidly.

After Aklima convinced her husband to produce maize on their fallow land, she carried out all the necessary steps she had learned about during the training (e.g. land preparation and sowing, application of fertilizer and irrigation at recommended times and doses). She was amazed to see maize growing on their previously fallow land and she could not believe that such a robust maize crop could possibly grow in her village. She was delighted to be able to produce this new crop at her own house using her labor, less irrigation and less fertilizer than other crops.

Aklima also received training on harvesting, drying, and storing as part of CIMMYT's program. She produced 256 kg of maize at harvest, at which time (May-June 2013) the market value of her production was only approximately BDT 3,500 (US\$ 45). However, she did not sell her production then, but instead stored it waiting for a better price. During the second week of September, Aklima sold 200 kg of her maize for BDT 5,000 (US\$ 64) or 25 BDT/kg. She used the remaining 56 kg for family consumption and poultry feed. Aklima was also happy to be able to use the maize stover as fuel.

After this experience, Aklima was interested in expanding her maize production on more land. During the first season she grew maize, her investment was low, but she wants to invest in more fertilizer and irrigation in the coming growing season. Neighboring women farmers have become inspired to produce maize too - due to Aklima's success in growing this crop. Aklima's experience has changed local perceptions about maize in an area where traditionally people had not viewed maize as a profitable crop. Now they see maize production as a new and exciting opportunity to increase their incomes.



**Swapon Roy, Aroti Roy's husband**

**"She also reminded me of the importance of the right dosage and timing of applying chemical fertilizer and weed management."**

# Aroti Roy

## A woman's touch saves seeds

*Between 10% and 25% of the rice crop is lost after harvest. As well as physical loss, poor postharvest management causes delivery delays which can reduce market prices of milled rice by a further 10-30%. Reducing postharvest losses in terms of quantity and quality helps increase farmers' returns from rice harvest and results in increased rice supply. This contributes to food security and ensures higher quality rice. Aroti plays a crucial role in making this possible.*



*"She also reminded me of the importance of the right dosage and timing of applying chemical fertilizer and weed management."*

*Swapon Roy, Aroti Roy's husband, CSISA-BD rice farming household, Khulna*

*Story: Ms. Sama Nasrin and Dr. Kamala Gurung*

*Photo: Ms. Sama Nasrin, IRRI*

Aroti Roy is a woman farmer from Auskhali Village in Batiaghata Upazila, Khulna District, Bangladesh. In her household, she is responsible for postharvest operations (drying, winnowing, selecting and storing seeds), cattle- and poultry-rearing, daily household chores such as cooking and collecting water, and child care.

In 2011, Aroti attended a training course run by CSISA-Bangladesh on Aman (rainy season) rice production and improved postharvest management practices for rice including seeds storage. In the following Aman season of 2012, she shared her new knowledge with her neighbors and her husband.

Aroti advised her husband, Swapon Roy, on seedbed preparation. She advised him to establish a raised seedbed which requires less seed (the conventional seedbed system requires a lot of seeds). The raised seedbed prevented damage to seedlings because of water poolings in depressed parts, producing strong seedlings.

"Her advice and encouragement resulted in healthy rice seedling. I was able to transplant these in the same piece of land using only half the usual seed rate," Swapon said of his wife. "She also reminded me of the importance of the right dosage and timing of applying chemical fertilizer and weed management," he added. As a result, Swapon began to practice line transplanting of rice, which reduced the number of seedlings needed. He also began using integrated pest management.

With Aroti's new knowledge on producing healthy seeds and improved seed storage techniques, she decided to keep her own seeds this year and share the extra seeds with her neighboring farmers. The training she received enabled her family to become seed producers, which provides an extra and independent income. She also uses IRRI Super Bags to store seeds and painted the earthenware pots for better seed storage.

Aroti and Swapon grew BRRI dhan 53, a new salt-tolerant rice variety, making it possible for them to grow Boro (dry season) seedlings early. She also cultivated Napier grass on the dike of her gher to feed the cattle, which means she no longer has to collect as much rice straw as before.



**Rabin Mandal, Radha Rani's husband**

**"She [Radha] is my Laxmi [Hindu Goddess of wealth] who helped enhance my gher productivity, which I had never imagined possible! I am indebted to CSISA and to Radha."**

# Radha is now valued as a knowledgeable farmer

*Radha's success in gher farming has helped many husbands see the benefits of involving their wives and valuing their capabilities.*



*"She [Radha] is my Laxmi [Hindu Goddess of wealth] who helped enhance my gher productivity, which I had never imagined possible! I am indebted to CSISA and to Radha."*

*Rabin Mandal, Radha's husband, CSISA-BD Farm Household, Khulna*

*Story: Sattyanarayan Roy and Afrina Choudhury*

*Photo: Md. Shaifullah, WorldFish*

Madhabkathi is a small village approximately 3 km away from Dumuria Upazila Sadar. Most of the families here depend on small-scale gher farming as their main livelihood option. Radha Rani lives in this village with her husband Rabin Mandal, who is a day laborer, and their two children. They have a piece of land for their homestead, and another 40 decimal plot that they leased for gher system farming. After receiving training from the CSISA-BD project on how to improve the productivity of her gher farm, Radha now dreams of a better future for her family.

Gher farming in this region involves alternately cultivating rice and prawns. In addition to his job as a laborer, Radha's husband dedicated whatever time he could to the small piece of leased land for growing prawns and rice. With little knowledge of integrated gher farming, Radha helped her husband. However, he had little faith in her capacity to take on the farming responsibilities during the times he was away at work.

In order to play a greater role in their gher farm, Radha joined the CSISA-BD project along with 24 women and men from her village to receive training on prawn culture and dike cultivation in the gher system.

After the training, Radha explained the new technologies to her husband and convinced him to take up these practices including preparing their nursery and stocking the required number of quality prawn Post Larvae (PL). She also convinced him to purchase a variety of vegetable seeds including cucumber, cabbage, beans and ladies finger, which she planted on their dike.

Recognizing her enthusiasm, CSISA-BD established a demonstration area in her gher site with both Radha and Rabin's name on the signboard. Radha's husband also noticed her proficiency and readily allowed her to take new responsibilities in his absence including feeding the PLs, monitoring water quality and fish growth and liming. Radha takes pride in her contributions, which require little time.

In November 2013, Radha and her husband harvested the first batch of prawns, which they sold for a total of BDT 55,520 (USD \$720) against a cost of BDT 32,400 (USD \$420). This is nearly seven times more income and a 30% decrease in production costs from the previous year.

Their vegetable crops sold for BDT 10,400 (USD \$134) against a cost of BDT 6,400 (USD \$83). At present, they have planted Boro rice and are preparing the nursery for stocking early PL.

"She is my Laxmi [Hindu Goddess of wealth] who helped enhance my gher productivity which I had never imagined possible! I am indebted to CSISA and to Radha," her husband professed after the successful growing season.

Neighboring women now meet with Radha and feel encouraged to be involved with their husbands. In a field day at Radha and Rabin's gher site, about 100 men and women witnessed their success. Many husbands in the community now see the benefit of involving their wives in farming activities and of valuing their capabilities.

This year many of the women who were involved in CSISA-BD's training sessions and saw the results of Radha's work, have started to engage in prawn nursery preparation.



**Selina Akter**

**“Due to the adoption of short duration rice varieties BINA dhan 7, my family is able to grow at least three crops a year which has generated extra income and reduced food insecurity.”**

# Selina Akter

## A successful farmer who is leading other farmers to a better future

*Rural women in Bangladesh are responsible for most of the hard work in and around the homestead, yet their work is seldom recognized as part of agriculture. But a woman from a small village in Bangladesh is proving that she can contribute to household food security through improved farming practices.*



*“Due to the adoption of short duration rice varieties Bina Dhan 7, my family is able to grow at least 3 crops a year, which has generated extra income and reduced food insecurity.”*

*Selina Akter, CSISA-BD Rice Farmer, Jessore*

*Story: Ms. Irene Sultana and Dr. Kamala Gurung*

*Photo: Ms. Irene Sultana, IRRI*

Selina Akter lives in Sajiali Village Jessore Sadar District in Bangladesh. Like most women in her village, she was involved in some agricultural production activities— from seed selection to harvesting and storage—and in managing livestock. Despite their contributions, local women depend heavily on their husbands (or other adult male family members) because the men make all the decisions in any income-generating activity. In 2011, however, Mrs. Akter’s role changed.

Early that year, Selina’s husband, Mohammad Yarab Ali, decided to migrate to a nearby town to work as a laborer. Her husband’s decision, although not easy, was necessary, as they could not afford to eat three meals a day and had to bear the expenses of their son’s college education. With her husband gone, Mrs. Akter took on new responsibilities and became the only decision-maker in agriculture-related matters.

### **A season for change**

A few months after Yarab left, Selina signed up for a rice-based farming system training program conducted by the International Rice Research Institute (IRRI) under the CSISA-BD project, upon advice from Joti, a CSISA-BD NGO partner.

Equipped with her new knowledge, during the 2011 Aman season, Selina decided to try growing a short duration (109 days) rice variety BINA dhan7 on a portion of their land, along with Swarna. Swarna is a late maturing (150 days) rice variety allowing only two crops a year, that her husband would plant every year (Jul to Oct) on the land they owned, which is a fifth of a hectare in size. While waiting for her main crop of Swarna to ripen, she harvested the BINA dhan7 and sold more than 75% of it for a price higher than that of Swarna paddy because of better grain quality and early (off-season) availability.

### **More than a rice farmer**

Early harvesting enabled Selina to cultivate mustard (BARI Sarisha15) on that portion of the land and she harvested 40 kg of mustard seed, some of which she sold. In the following Boro season (December to May), she planted BRRI dhan28, another early-maturing (140-day) rice variety that can potentially yield 6 tons per ha. She also used rice straw and mustard residue to feed their cattle, which meant more savings for her household.

Selina did more training on postharvest management and learned about proper storage of rice seeds. From her first harvest of BINA dhan7, she stored 50 kg of seed using an IRRI Super Bag provided by CSISA-BD. This protected the seeds from moisture, mold, and pests and kept the seeds viable for up to a year.

### **Sowing her own seeds**

In the Aman season of 2012, Selina planted BINA dhan7 again, this time on her entire farmland—one-fifth of a hectare—using her own saved seeds. Because she practiced proper seed storage, the germination rate from her rice seeds was more than 80%, indicating good seed vigor and healthier seedlings.

Selina was very happy to have joined CSISA-BD’s rice production program. Twenty farmers took Selina’s advice and began growing short-duration rice varieties. To increase their income, they also planted non-rice crops, such as mustard, between the Aman and Boro rice crops.

Family and financial circumstances gave Selina Akter an opportunity to step out of her traditional housewife role. With the right training, she demonstrated the extent to which a woman can potentially contribute to others in her village. She is now a successful farmer who helps lead other farmers to a better future.



Participants at a workshop entitled "Mentoring and connecting Women Entrepreneurs in Business" jointly organised by the CSISA-BD project and UN-Women on 16 and 17 November, 2013 in Khulna. The main objective of this workshop was to link 50 small-scale agro-based women entrepreneurs from the southwest region of Bangladesh with government agencies, banks, agri-businesses and women-led business associations.

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