Workshop to honor and recognize women’s contribution in Agriculture

Women in agriculture play a major role in improving the overall well-being of their households and communities, working to achieve food and nutrition security, generating income, and improving rural livelihoods. However, they also face a number of constraints, which can hamper their efforts to uplift their lives and those around them. In particular, they have consistently less access than men to the resources and opportunities they need to be more productive. Achieving gender equality and empowering women in agriculture is not only the right thing: it is also crucial for agricultural development.

In November 2012, CSISA-BD farmers and partners from the hubs of Jessore, Khulna and Barisal, in southern Bangladesh, participated in the workshop, Women in Aquatic Agricultural Systems, held in Jessore, in celebration of International Day for Rural Women. The event was marked by the presence of Grace Mozena, wife of the US Ambassador to Bangladesh. Dr Shakuntala Thilsted (Senior Nutrition Advisor, WorldFish) inaugurated the program and Angela Gomes (founder-director of Bachte Shekha) chaired the occasion.

The workshop was designed to create awareness of the valuable role rural women play in agriculture, to identify the constraints they face, to share experiences of how these constraints are being dealt with, and provide real examples of the technologies and practices that are helping to enhance their role.

The event’s main attraction was the presentations given by the women farmers, who with great confidence came up on stage in front of an audience of hundreds, and used PowerPoint presentations to talk about their work. It provided a unique platform to share best practice, and enabled women farmers to speak out about the changes that have been brought about by innovations, and the challenges they still face. Husbands also came along with the women to witness the valuable role their wives play.

Presentations were given by representatives from the CGIAR centres, IRRI, CIMMYT and WorldFish, as well as by CSISA-BD’s international (HKI, SPRING, BRAC) and national (Bachte Shekha, TMSS, Renaissance) partners.
The event opened with a slideshow showing the roles rural women play in aquatic agricultural systems, and presented some facts about the larger – and often unrecognised – contributions they make. Farmer presentations followed, and an exhibition and site visits showcased examples of good practice, as well as providing the farmers with an opportunity for motivational exchange. The exhibition showcased some of the technologies, interventions, and extension materials being used by various agencies to promote and enhance the role of rural women.

In the exhibition, the CSISA-BD IRRI stall displayed the post-harvest technologies that women are involved with, including seed storage systems and devices: clay pots, plastic and metallic drums, bags made from various materials, the IRRI ‘super bag’, a dol (a bamboo basket for paddy storage), a collapsible dryer case and some traditional tools for drying seed in the sun. The CSISA-BD WorldFish stall offered samples of the many nutrient-rich foods that WorldFish promotes, including orange flesh sweet potato and its leaves, and the small, micro-nutrient rich fish, mola.
A broad range of partners and stakeholders attended the workshop, including representatives from government institutions, the private sector, research institutions, and national and international NGOs. Organised by WorldFish, key participants included the USAID-funded Feed the Future program (as represented by CSISA-BD and FTF-Aquaculture projects), partners of WorldFish and the CGIAR Research Program on Aquatic Agricultural Systems. It was a successful event and ended with the hope that this kind of workshop will be organised again in the future to inspire and encourage women working in this field.

By Afrina Choudhury

IRRI Bangladesh: a winning stall at BAU’s Golden Jubilee fair

IRRI Bangladesh won first prize in the International Category for its stall at the agro-technology fair organized by Bangladesh Agricultural University (BAU) as part of its golden jubilee celebrations held in January, 2013 on the BAU campus, Mymensingh. It was attended by Prime Minister Sheikh Hasina.

To celebrate 50 remarkable years of contribution to the development of Bangladesh’s agriculture sector, BAU invited 10,000 of its graduate agriculturists and their families to join the fair. IRRI was there to support BAU and to celebrate their work together, as well as to reassert its commitment to the country’s rice growers.

A clay map of Bangladesh showed the country’s environmental-stressed regions, along with recommendations for the most appropriate rice varieties for farmers in such adverse situations to use. The stall also displayed traditional and improved seed storage devices. IRRI’s work with Bangladesh’s public and private sector partners is well-established in agricultural research and extension systems in every rice-growing area of the country.

By Debashish Chanda

Local service providers in Kramji Char use the Axial flow pump to supply irrigation to maize planted on raised beds. The AFP increases fuel and irrigation efficiency.

Ms Mozena handing gift to farmer Ms Parvin Begum

Champa Begum posing with Ms. Mozena at her household

Guests were taken to visit Champa Begum’s home in Potengali, Jessore, where they were shown her household pond aquaculture and horticulture production. Her husband is a day labourer, which means his income is not secure; by applying her training and knowledge, Champa is now able to add to the family income as well as having the ingredients for a nutritious meal for her family: mola (the micronutrient-rich small fish she cultures in her pond) and orange flesh sweet potato, one of the many vegetables she produces herself.

see details on pages 4-5
Within the mosaic of distinct agricultural seasons, two and sometimes three crops can be cultivated in the same field each year in Bangladesh, underscoring the country’s potential for agricultural productivity. However, in the impoverished region of Southern Bangladesh, only 50% of farmers currently grow more than one rainy season rice crop per year. Bangladesh is the world’s most densely populated country, and leaving vast tracts of land unused is not a sustainable option given projected population increases and future demand for cereal. These problems are compounded by the evident shrinkage of agricultural lands of one per cent annually due to accelerated urbanization and rising sea levels.

Restraining farmers from increasing cropping intensity are difficulties irrigating their crops during the dry season, the high cost of agricultural labor, and delays in rice harvesting that set back timely planting of the subsequent dry season wheat, maize or legume crop. To overcome these constraints, CIMMYT works closely with public and private sector partners, local agricultural service providers, and farmers to encourage efficient agricultural mechanization, irrigation, and conservation agriculture.

In January 2013, CIMMYT-Bangladesh hosted a field day in Kramji char, Barisal, to raise awareness of its work to sustainably intensify cropping in Southern Bangladesh. The field day was held in association with International Development Enterprises (iDE), CIMMYT’s close NGO partner, and showcased activities of the European Union-funded Agriculture, Nutrition, and Extension Project, as well as the USAID-funded Cereal Systems Initiative for South Asia in Bangladesh. The field day was attended by CIMMYT and a number of public and private sector representatives.

WorldFish held a training of trainers course on aquaculture technologies for 29 extension staff from 8 partner organizations between 8-13 December 2013. The training was held at Spandan Training and facilitation Center, Mymensingh.

Agricultural machinery service providers (supported by CIMMYT) demonstrate the use of a two-wheel tractor seeder-fertilizer drill set in strip tillage mode, a conservation agriculture technique.
CIMMYT’s work in Kramji char and much of Southern Bangladesh focuses on the sustainable provision of low-cost, fuel-efficient surface water irrigation using Axial Flow Pump (AFP) technologies, which can provide up to 46% more water per drop of diesel fuel consumed for diesel pumping than conventional practice. CIMMYT also popularizes the use of agricultural machineries appropriate for conservation agriculture, such as seeder-fertilizer drills, bed planters, and reapers that can be attached to two-wheel hand tractors. These enable more efficient planting and irrigation water use while reducing labor requirements and farmers’ costs. Working with iDE, CIMMYT is developing business models for private sector and local machinery service provider partners to ensure farmers’ access to conservation agriculture services at low-cost. At the end of the day, the Secretary of Agriculture concluded that “…the demonstration of these machineries opens the door to increased crop productivity and farmers’ income.”

The field day was jointly organized by CIMMYT’s Dr. Timothy J. Krupnik, Dr. Yusuf Ali, Dr. Samina Yasmin, Dr. TP Tiwari, and Dr. Andrew McDonald. The event’s success would not have been possible without the valuable coordination and contribution of CIMMYT’s iDE partners, notably Rajiv Pardhan (Bangladesh Country Director), Nurul Amin (Operations Manager), Afzal Hossain Bhuiyan (Business Development Specialist), and Richard Rose (Manager, Technology Portfolio).

By Timothy J. Krupnik

Collapsible dryer case makes paddy drying easy

Collapsible dryer cases are used to sun-dry paddy and other agricultural commodities in a safe and protected way. The dryer cases, made of heavy duty, black reinforced PVC material, are waterproof, easily folded and transportable. In 2012, the use of a collapsible dryer case was demonstrated to a farmers’ IPM club in Fakirhat, by CSISA-BD staff. Thirty farmers were present along with officials from the extension department and local government office.

Farmers are now very happy to use this dryer, and report many advantages to it. It is easy to share with their neighbours, and most of them it heats up so quickly, they can dry their paddy in one day (the dryer is black and so absorbs heat very quickly). Jarina Khatun, a woman from Fakirhat, says that in her yard she used to only be able to dry a maximum of 200kg but now with this dryer she can dry more than 1MT, five times more than before in the same space. She has also noticed that it dries very quickly. No fees are being charged yet for the use of this dryer but members of the farmers club can charge a minimum fee for its use by others.

CSISA staff demonstrated the largest size of dryer (75 m²), which is rather too big for farmers and households to use: 44m² and 25m² are good enough for drying paddy and other crops in the farmer’s yard or even out in the field. Although the price is a little high for Bangladesh’s farmers, some larger farmers can manage it. If the government could subsidize or exempt it from duty, many more would be able to afford it.

By Debashish Chanda
Maloti Rani Mondol’s great success in shrimp culture after 12 long years

For the past 12 years that Maloti Rani Mondal has been involved in shrimp farming, she has never seen such results as she’s witnessed this year. She happily recalls the day that she decided to attend the CSIS-BD training that helped enhance her skills and knowledge of shrimp cultivation. These days, she openly shares the secrets of her success with her neighbouring farmers, with the hope that they will be able to prosper as she has.

Kalabaria village in Debhata upazila in Khulna, involved with traditional shrimp farming on her land under a fifth of an acre), has never reached such yields before. Maloti shared the secrets of her success: diversification and a number of off-farm and non-farm activities. Dr Rashid highlighted that the situation has changed dramatically, leading men to migrate, sometimes for months, leaving women with a diversified farming and non-farm activities. Dr Rashid highlighted that the situation has led to a decrease in traditional practices and attacks and low yields.

In February 2012, provided Maloti with two methods of shrimp cultivation: the her up as a model farmer improved shrimp success the neighboring newly-acquired knowledge taught her to first prepare an earthen nursery in a corner of her gher and stock it with quality fingerlings (6,000 PCR (Polymerize Chain Reaction) tested Post Larvae (PL)– collected from Gazi Fish Culture Ltd (a partner organization of CSISA-BD). In about 25 days, about 4000 of the post larvae were released into a prepared grow-out gher. She took care of the shrimps by feeding them (with commercial feed from C P Bangladesh) and applying essential chemicals to maintain water quality throughout the culture period.

Maloti said that she never seen such yields before. The mortality rate was minimal; she realizes now that she does not have to stock a high density of fingerlings, and that the quality is more important. She also knows about supplementary feed, and the regular liming of the pond for better growth of shrimp.

In July 8, 2012 she started the second cycle of prawn cultivation, which she harvested around the end of October 2012, and which brought her 88kg of shrimp.

Maloti’s proudly bought her husband a motor cycle with the money earned. She has planned to develop another pond like this in 2013, helped by her new-found knowledge. She spread the words to her neighbouring farmers and some – Boloram, Sandha Rani, and Laxmi Mondol – have been encouraged to follow Maloti’s example in their own ghers.

In August 2012 a field day was organised at the side of Maloti’s gher. The upazila Fishery Officer, Debhata attended, and confirmed that CSISA-BD initiatives have been helping shrimp farmers in the area. The District Fisheries Officer of Satkhira also spoke, encouraging farmers to take up improved technologies like Maloti has done, as it would result in their increased production and income from shrimp farming.

By Md Mizanur Rahman
A Real Cornucopia: intercropping vegetables with maize

Maize is new to most farmers in the greater Mymensingh region, but the number of fish and poultry feed mills in the area means that there is a market for maize grain, and ample opportunity to get a good price for it. Despite the high profit potential for maize, however, farmers are reluctant to grow the crop; their knowledge of the relevant production technologies is slim, and the high initial investment for hybrid seeds and fertilizer is constraining. The intercropping of short duration leafy vegetables is one strategy that effectively counters these deterrents. This approach can provide early returns to help offset the production costs of maize for the area’s poor farmers. As a cover crop, the leafy vegetables also reduce weed infestation (thereby saving labour) and through the conservation of soil moisture – especially important in the light-textured soils of the chars, with their low water-holding capacity. Moreover, leafy vegetables are harvested around 40 days after seeding, which is about the optimal time for the maize to be irrigated and receive its first top dress of urea.

Working with Md Rafiqul Islam, a farmer from Biarta, CIMMYT personnel from the CSISA-BD Mymensingh Hub conducted an on-farm demonstration of the vegetable red amaranth intercropped with maize, on Mr Islam’s farmland. Maize and red amaranth were seeded together in November, 2012. Around the same time, other farmers in his village were trained by CIMMYT staff in the practice of maize intercropping. All trainees carried out the recommended management practices, the single exception being that of basal fertilizer application (applied by broadcasting rather than band placement in the seeding line, as advised). At the stage of vegetable harvesting, crop conditions indicated that maize suffered no ill effects from either nutrient or moisture deficiency.

In Bangladesh, the cost of production for a sole maize crop is approximately BDT 68,000 ($850) per hectare under the recommended production technology. The total production cost for this intercropping demonstration was BDT 69,976 ($875) per hectare – the BDT 1976 ($25) per hectare cost of the red amaranth seed being the only addition to Mr. Islam’s production costs. Because Mr. Islam sold his red amaranth on a contractual basis for BDT 69,600 ($870) per hectare, the subsequent total revenue from his maize crop will be entirely profit.

Intercropping technology can be a very powerful addition to the farming systems of poor farmers in Bangladesh, not only to cover production costs of maize, but also to increase the nutrition of the farm household through vegetable consumption. In 2012, the Mymensingh Hub conducted 15 additional intercropping on-farm demonstrations with crops including spinach, mustard, cabbage, coriander, and potato.

By Dinabandhu Pandit, Frederick Rossi, Mahesh K Gathala

Aroti Roy: blessed by rice-based technologies

Ms Aroti Roy is a farmer living in Auskhali village, 13km from Khulna city. In 2011, she received training from the CSISA-Bangladesh project on aman rice production and how to improve her post-harvest practice. In 2012, she applied what she had learned in training, and shared it with neighbouring farm families. She told her husband about using a raised seed bed, which reduces the amount of seed used by the conventional seed bed system. Aroti’s husband says, “Her encouragement to use raised seed beds gives me healthy rice seedlings – I use half the usual amount of seed.” She has passed on to him her new knowledge about the benefits of improved technology for fertiliser application and weeding. Aroti’s husband now practices line transplanting of rice – which uses fewer seedlings – and integrated pest management. The training also showed Aroti how to improve her production and storage of seeds, and this year she has kept seed for herself and extra to sell to the neighbouring farmers. She painted earthen pots for seed storage and also used the IRRI ‘super bag’, which she is telling the other village women about.

These are not the only techniques Aroti learned in the training. She and her husband have also grown a new salt-tolerant rice variety, BRRI dhan53, which allows them to grow their boro seedlings early. She also grows Napier grass on the dyke alongside her gher to feed to her cattle. The training has made Aroti part of a seed grower family.

By Shama Nasrin, Harunur Rashid, Kamala Gurung
Developing public-private partnerships to expand conservation agriculture is one of the main goals of the USAID-funded Cereal Systems Initiative for South Asia in Bangladesh (CSISA-BD). One of its key partners, CIMMYT, has partnered with International Development Enterprises (iDE) to develop business models in support of Solar International, a leader in Bangladesh’s agricultural machinery sector. To kick-start the partnership, Solar International recently imported 54 seeder-fertiliser drills that can be attached to two-wheeled tractors ubiquitous in Bangladesh, and used for strip tillage, a conservation agriculture technique. The use of such machinery responds to the need for rapid precision planting of wheat and reduced turnaround time before the rice harvest, as well as the increasing labor scarcity in Bangladesh. The partnership prioritizes farmer and service provider training in better-bet agronomic practices, optimum use of the seeder-fertilizer drills, and marketing of agricultural services to small and marginal farmers at reasonable prices.

In November 2012, supported by CIMMYT, Solar International and iDE completed the in-depth residential training and certification of 108 leading agricultural service providers and their machine operators who had already purchased the seeder-fertilizer drill. To make this approach both scalable and sustainable, SI embedded the cost of training into the market price of the equipment, emphasizing program sustainability by securing a training and funding source for continuation after CSISA-BD withdraws. In turn, CSISA-BD supplied a 50% cost-rebate to purchasing service providers upon successful completion of the training course. This PPP was brokered by Dr. Timothy J. Krupnik, Cropping Systems Agronomist in Bangladesh, Rajiv Pradhan (iDE), and Sohel Khan (Solar International). Trainings were facilitated by representatives of Solar International, Farhad Hossain (CIMMYT Agricultural Development Officer), Scott Justice (CIMMYT Machinery Consultant), and Shafiq Islam (CSISA Training and Outreach officer).

By Timothy J. Krupnik