



Sustainable Soil Management Component (SSMC) of OCP Foundation's Agricultural Development Project in Bangladesh – Stage 1

MONTHLY REPORT | AUGUST 2017



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Acronyms and Abbreviations

BADC	Bangladesh Agricultural Development Corporation
BARI	Bangladesh Agricultural Research Institute
BRRI	Bangladesh Rice Research Institute
DAE	Department of Agricultural Extension
FC	Field Coordinator
GAPs	Good Agricultural Practices
GOB	Government of Bangladesh
GPS	Global Positioning System
ICARDA	International Center for Agricultural Research in the Dry Areas
IFDC	International Fertilizer Development Center
OFRD	On-Farm Research Division
SAAO	Sub-Assistant Agriculture Officers
SRDI	Soil Resource Development Institute
SSMC	Sustainable Soil Management Component
UAO	Upazila Agriculture Officer

Sustainable Soil Management Component (SSMC) of OCP Foundation's Agricultural Development Project in Bangladesh – Stage 1

Monthly Report (August 2017)

Introduction

The OCP Foundation signed an agreement with the International Fertilizer Development Center (IFDC) for implementation of the Sustainable Soil Management Component (SSMC) of OCP Foundation's Agricultural Development Project in Bangladesh – Stage 1 for a period of three years, from January 2017 to December 2019. SSMC is addressing many of the increasing, serious soil fertility concerns of the northern districts of Bangladesh while also helping farmers enhance crop productivity and profitability through the implementation of improved soil management methods in the overall context of market-sensitive good agricultural practices (GAPs).

OCP Foundation's comprehensive project also includes input from OCP Foundation and the International Center for Agricultural Research in the Dry Areas (ICARDA). The overall objective of this agricultural development project is “sustainable management of soil to enhance yields and farmers' incomes under resilient production systems in Bangladesh, resulting in food and nutrition security, improved health and livelihoods.” The project includes the SSMC in addition to monitoring and capacity building inputs by OCP Foundation and work related to the promotion of GAPs, entrepreneurship, and farmer organizations by ICARDA. The project targets rice, maize, potato, pulses, and, to a lesser extent, wheat.

SSMC is being implemented with Government of Bangladesh (GOB) counterparts – Bangladesh Agricultural Research Institute (BARI), Bangladesh Rice Research Institute (BRRI), Department of Agricultural Extension (DAE), and Soil Resource Development Institute (SRDI). Additionally, agro-input retailers are also involved to promote balanced plant nutrient and GAP solutions for improving crop productivity, crop profitability, and soil fertility. The primary approach of the project for IFDC is to conduct trials with BRRI and BARI and field extension activities with DAE. This monthly report shows the progress achieved in August 2017.

Technical Program Activities

As per the annual work plan, major technical activities conducted during the reporting month included the following, which are linked to cropping season and deliverables and aimed at achieving the project goal.

Field Trials

- IFDC signed a grant agreement with the On-Farm Research Division (OFRD) of BARI on August 3, 2017, for conducting on-station and on-farm trials on four non-rice crops – maize, potato, lentil, and wheat. On-station trials will be held in Rangpur and Bogra districts, and site selection of on-farm trials will be finalized in September. Transplantation of all the crops will be completed in October-November 2017.
- The on-farm trials of the *Aman* 2017 crop set up by BRRI at Pirganj is in the tillering stage and in good condition. However, the field trial site at Kurigram Sadar was inundated by floodwater. In this trial plot, the submergence-tolerant BRRI dhan 52 variety was used. After 13 days of inundation, floodwater receded from the trial plot. The crop was affected, but it is recovering from submergence stress. Necessary gap filling and ail/field bunds reconstruction work continued after the water receded.

Field Demonstrations

- Of the 10 demonstration plots, nine were established in July, and the remaining one was established early in the reporting month. The variety used was BRRI dhan 51, and the seedling age was 30 days. The DAE sub-assistant agriculture officer (SAAO) and SSMC senior staff and field coordinator (FC) actively participated in the establishment of the last *Aman* 2017 demonstration plots. Details regarding the last demonstration are provided in the following table.

District	Upazila	Target	Achievement	Date of Transplantation
Natore	Natore Sadar	01	01	August 1, 2017

- In one *Aman* demonstration at Palashbari, Nilphamari Sadar, supplementary irrigation water has been applied due to scarcity of rain. The first application of urea topdressing has been completed by the demonstration farmers in all 10 *Aman* demonstration plots as per guidelines. Concerned SAAOs of DAE supervised this activity.

- The focal point of DAE monitored two SSMC *Aman* demonstration plots at Saidpur and Nilphamari Sadar of Nilphamari district. He observed that crops were in good condition and OCP compound fertilizer treatment plots were in better condition compared to other treatment plots. The number of tillers were higher in OCP fertilizer plots than other plots. Crop color and vigor were also better than other plots. He has advised upazila agriculture officers (UAOs) to supervise all the SSMC activities through SAAOs regularly.
- Before inundation of the *Aman* crop fields by flooding via river water and continuous rain, the FC of SSMC monitored seven SSMC *Aman* demonstration plots at Shahjahanpur, Saidpur, Nilphamari Sadar, Chirirbandar, Dinajpur Sadar, Kurigram Sadar, and Nageswari upazilas. Until then, crops in all seven demonstrations were in good condition. The FC also observed that the OCP compound fertilizer treatment plots in four demonstration sites at Saidpur, Nilphamari Sadar, Chirirbandar, and Dinajpur Sadar were in good condition compared to other treatment plots. The number of tillers were higher than other plots.
- On August 10, 2017, cropped areas became inundated with flooding due to continuous heavy rainfall and over-bank river flooding. SSMC senior staff and FC monitored all 10 SSMC *Aman* demonstration plots; six demonstrations were completely inundated at Dinajpur Sadar, Chirirbandar, Saidpur, Nilphamari Sadar, Nageswari, and Gomostapur upazilas of Dinajpur, Nilphamari, Kurigram, and Chapai Noawabganj districts, respectively. After the floodwater receded from the *Aman* crop fields, all of the SSMC *Aman* demonstration plots were again monitored by SSMC senior staff and FC. Of the six inundated demonstration plots, one at Dinajpur Sadar upazila was badly affected by flooding, and the crop was damaged in all the four sub-plots in several patches. In Saidpur and Chirirbandar upazilas, crops were partially affected. Crops in affected demonstration plots have started recovering. Concerned UAOs/SAAOs and demonstration farmers were advised to use urea and muriate of potash (MOP) as a topdressing as per recommendation, and all farmers followed the project's instructions.
- Gap filling was done properly using seedlings kept for this purpose in all the affected subplots at Dinajpur Sadar upazila. The FC supervised the gap filling activities in demonstration plots.
- In the demonstration plot at Nageswari, the crop was partially affected by flooding. Farmers and SAAOs were advised to fill the gaps with the remaining seedlings and use the recommended topdressing. Crops in the remaining eight demonstration plots in different locations are at the tillering stage and in good condition.

- The FC of SSMC has handed over all 10 signboards and 40 plot labels to the concerned SSMC *Aman* demonstration farmers. All the signboards and plot labels have been erected properly in demonstration plots during the reporting month. Concerned SAAOs of DAE, the FC of SSMC, and demonstration farmers actively participated in setting up the signboards.
- Five non-rice demonstration sites have been selected by SSMC senior staff and FC and DAE officials. Two sites for lentil at Gomostapur, one site for wheat at Nachole, one site for potato at Shahjahanpur, and one site for maize at Natore have been selected.

Farmers' Training

Two lists of farmers have been collected from Gomostapur and Natore Sadar upazila for farmers' training programs for the coming Rabi season for lentil. In each training program, 25 farmers, including one demonstration farmer, and five retailers/dealers will participate.

GPS Coordinates

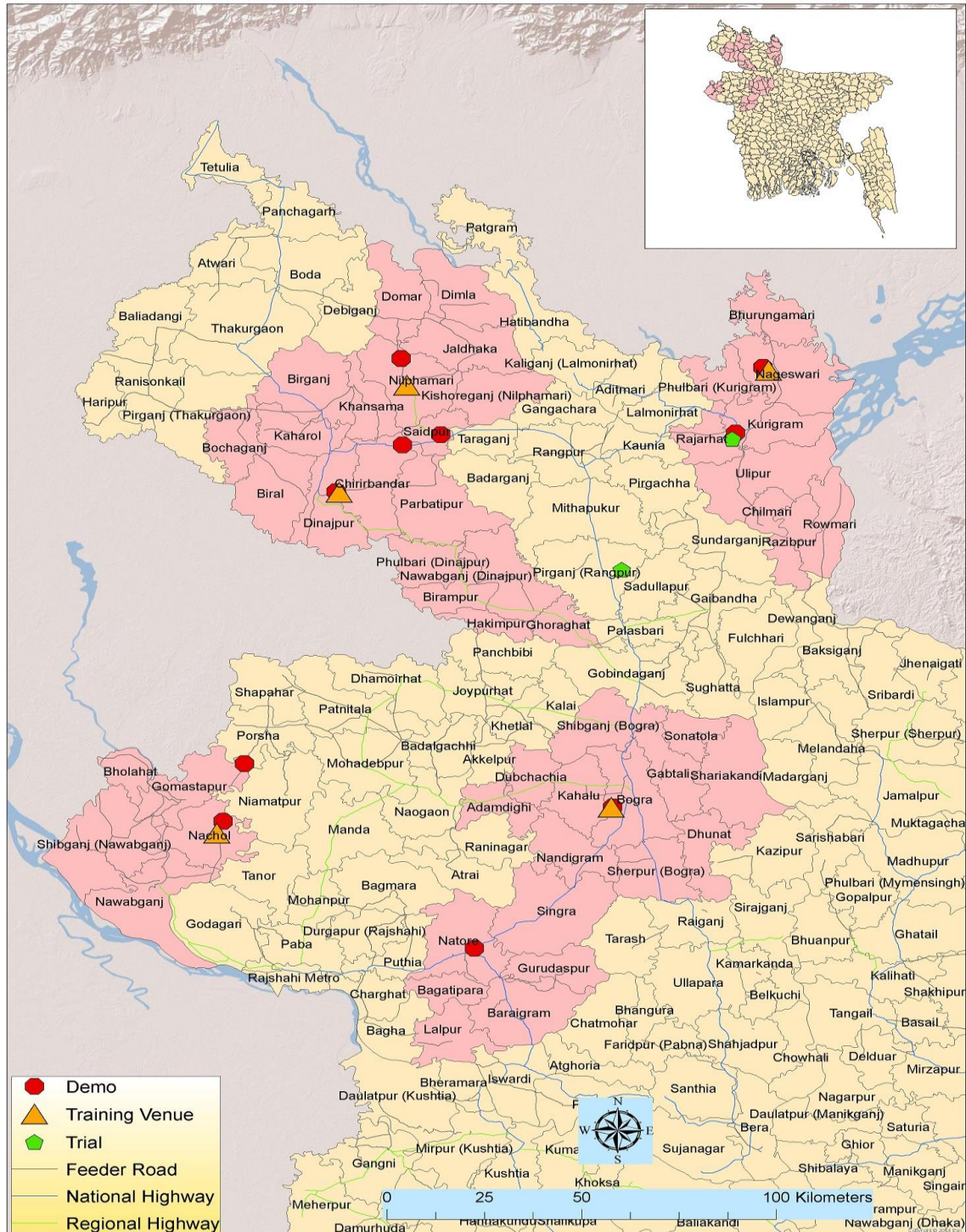
SSMC staff have collected information on coordinates of 10 *Aman* demonstration plots, two on-farm *Aman* trial plots, and five farmers' training venues in different locations. All the coordinates have been compiled by IFDC. Map 1 shows the locations as recorded using global positioning system (GPS) devices for 10 demonstrations, two trials, and five farmers' training venues.

Other Activities

- Deputy Director of IFDC Asia attended a meeting with the Chairman of the Bangladesh Agricultural Development Corporation (BADC) at his office to update him about the progress of SSMC activities. She discussed the present SSMC activities as well as the future work plan. She extended her thanks to the BADC Chairman and other officials for their cooperation in providing OCP-gifted compound fertilizer to IFDC. As per their requirement, information about the ratio of a boron-containing compound fertilizer APS-(19N-38P₂O₅-6S-1B) was also provided to BADC. As per the BADC Chairman's request, IFDC also provided details about SSMC protocols of different treatments of demonstration plots for lentil, maize, and potato. The Chairman informed the IFDC Deputy Director that BADC would like to conduct the demonstrations themselves in the above three crops using the 19N-38P₂O₅-6S-1B category of OCP fertilizer.
- IFDC has sent following the documents to the OCP Foundation:

1. A training module with detailed contents of the trainings. This was mainly prepared in Bangla. However, SSMC senior staff have translated it into English for the OCP Foundation officials.
2. List of pictorial training materials distributed to the farmers/retailers. These were also mainly prepared in Bangla. However, SSMC senior staff have translated them into English for OCP Foundation officials.
3. GPS point data for *Aman* 2017 for 10 demonstrations, five farmers' training, and two trials.
4. A list of 149 training attendees, including their addresses and cell phone numbers. However, it was difficult for one field staff member working alone to collect GPS data for 149 farmers. The project will need additional staff and resources to do this. In the coming season, another 55 farmer/retailer trainings will be conducted with 1,650 participants; it will be difficult for one person to collect coordinates of 1,650 farmers. The DAE staff members are not trained to collect GPS data points.

Sustainable Soil Management Component (SSMC) Project Location of Demo, Trial and Farmers Training Venue



Map 1. GPS Coordinates

Photographs of SSMC Activities



Erecting signboard by concerned SAAO and farmer at Saidpur in August 2017



Crop condition in demonstration plot at Kurigram Sadar in August 2017



Trial plot inundated by recent flood at Kurigram Sadar in August 2017



Crop recovered in trial plot after receding floodwater at Kurigram Sadar in August 2017



Demonstration plot inundated by recent flood in August 2017



Gap filling by concerned farmer in flood-affected demonstration plot after receding floodwater in August 2017