

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

MONTHLY REPORT | OCTOBER 2018



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INTERNATIONAL FERTILIZER DEVELOPMENT CENTER
PO BOX 2040 | MUSCLE SHOALS, AL 35662 | USA



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Acronyms and Abbreviations

BARI	Bangladesh Agricultural Research Institute
BLB	Bacterial Leaf Blight
BRRI	Bangladesh Rice Research Institute
DAE	Department of Agricultural Extension
FC	Field Coordinator
GAP	Good Agricultural Practice
GOB	Government of Bangladesh
ICARDA	International Center for Agricultural Research in the Dry Areas
IFDC	International Fertilizer Development Center
IPM	Integrated Pest Management
M&E	Monitoring and Evaluation
NPSB	Nitrogen, Phosphorus, Sulfur, and Boron
NPSZn	Nitrogen, Phosphorus, Sulfur, and Zinc
NPKSB	Nitrogen, Phosphorus, Potash Sulfur, and Boron
OFRD	On-Farm Research Division
SAAO	Sub-Assistant Agriculture Officer
SRDI	Soil Resource Development Institute
SSMC	Sustainable Soil Management Component
TSPZn	Triple Superphosphate with Zinc
UAO	Upazila Agriculture Officer
UP	Union Parishad

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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 works 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, agri-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 October 2018.

Technical Program Activities

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

Field Trials

The locations of the 13 on-farm and on-station non-rice crop field trials were finalized by the On-Farm Research Division (OFRD) of BARI. Eight field trials will be established in Rangpur and Dinajpur regions, and the remaining five will be established in Rajshahi region. In consultations with SSMC/IFDC senior staff, the revised trial protocols for non-rice crops (potato, maize, lentil, and wheat) were reviewed and finalized by OFRD, BARI. OFRD confirmed that it has received four categories (TSPZn, NPSZn, NPSB, and NPKSB) of OCP compound fertilizers as per their requirement.

Farmer Training

In October, 12 batches of farmer training programs were conducted with 360 progressive farmers. Details are presented in Table 1. Of the 360 trained farmers, 318 were men and 42 (12%) were female progressive potato, maize, and wheat farmers.¹ Twelve demonstration farmers also attended the training programs. In addition, 58 agri-input retailers were present. The training module included a PowerPoint presentation, an oral presentation, and group discussions using the participatory approach, and practical demonstrations on identification techniques of adulterated micronutrient fertilizers. The IFDC regional director of Asia and the monitoring and evaluation (M&E) specialist, along with DAE officials, monitored the farmer training program at Dinajpur Sadar. Twenty-one farmer training programs on transplanted (*T. Aman*), lentil, potato, maize, and wheat were completed.

Table 1. Farmers' Training Organized in October 2018 Under SSMC

Sl. #	Districts	Upazilas	Batches	Male	Female	Total	Fertilizer Retailers	Grand Total
1.	Bogra	Gabtoli	2	42	8	50	10	60
2.	Bogra	Shahjahanpur	1	20	5	25	5	30
3.	Nilphamari	Sadar	1	24	2	26	4	30
4.	Dinajpur	Sadar	2	47	3	50	10	60
5.	Dinajpur	Chirirbandar	1	25	0	25	5	30
6.	Kurigram	Nageshwari	1	19	6	25	5	30
7.	Saidpur	Nilphamari	2	40	10	50	10	30
8.	Chapai Nawabganj	Nachole	2	43	8	51	9	60
	Total		12	260	42	302	58	360

Field Demonstrations

In this reporting month, one SSMC *T. Aman* demonstration plot has already been harvested. The remaining crops of *T. Aman* demonstration were in maximum panicle initiation to hard dough stage. Necessary steps were taken by farmers against pests and insects like bacterial leaf blight (BLB), blast, stem borer, and rat attack. The DAE deputy director, upazila agriculture officers (UAOs), concerned sub-assistant agriculture officers (SAAOs), SSMC senior staff, and the field coordinator (FC) monitored SSMC *T. Aman* demonstration plots and actively participated in all

¹ Progressive farmers are those who are willing to use good farm practices (GAPs – such as using good quality seed and balanced doses of fertilizers, maintaining proper spacing from line to line and plant to plant, practicing integrated pest management [IPM] with improved technologies, etc.), establish their own demonstration plots, share their knowledge, and encourage their neighboring farmers to use GAPs along with improved technologies.

activities, such as site selection, layout design, application of fertilizers and pesticides, and other farm management practices. The IFDC regional director of Asia, and M&E specialist also monitored several *T. Aman* demonstration plots at Saidpur, Dinajpur Sadar, Chirirbandar, Kurigram Sadar, and Nageshwari upazilas. They discussed with the demonstration farmers as well as other local farmers about the condition of crops under different treatments using OCP fertilizers. Due to shortage of rainfall, soil moisture stress was observed in almost all areas. Necessary supplementary irrigation was applied in all the demonstration plots as per requirement. Overall crop condition was good. Soil samples were collected from demonstration plots to measure pH levels using SRDI laboratories in Rajshahi, Bogra, and Dinajpur. Soil pH values ranged from 5.1 to 6.4.

Crop Cut

One crop cut from a *T. Aman* demonstration plot was completed in Gabtoli, Bogra, on October 31, 2018. SSMC senior staff, FC, DAE officials, Union Parishad (UP) chairman and member, other local farmers, and concerned demonstration farmers attended the crop cut and field day program. It was observed that among the three fertilizer treatments, lime-treated OCP compound fertilizer (TSPZn and NPSZn) treatment plots performed better, and yield increased by about 7.5% over farmers' practice. Crop yield data per treatment is provided in Table 2.

Table 2. T. Aman 2018 Demonstration Crop Cut Results Under SSMC

SL. #	Location	Variety	T1 Farmers' Practice	T2 OCP Compound + Straight Fertilizer With Lime (TSPZn)	T3 OCP Compound + Straight Fertilizer With Lime (NPSZn)
(metric tons per hectare)					
1	Gabtoli, Bogra	BRRIdhan 49	6.70	7.00	7.20

Field Day

After the crop cut from the *T. Aman* demonstration plot, a field day was organized at Gabtoli in Bogra district. The UP chairman and member, DAE UAO, assistant agriculture officer, SAAOs, SSMC senior staff and FC, and local farmers attended the crop cut and field days at Gabtoli on October 31, 2018. Ninety-nine farmers (male-94 and female-5) attended the field day program. A demonstration farmer shared his experiences with the participants. It was observed that the net grain weight of paddy in OCP fertilizer treatment plots was higher than farmers' practice plot.

All farmers showed their interest in OCP compound fertilizers subject to the fact that the quality of OCP fertilizers would remain good and available at their locality. Concerned demonstration farmers expressed their opinions about the SSMC demonstration plot and the crop performance. Reporters of local newspapers and electronic media attended the field day program.

Activity Achievement Against Target

Details of activities completed through October 2018 against the target of the Year 2 work plan are presented in Table 3.

Table 3. Activity Achievement through October 2018 Against Year 2 Workplan Under SSMC

Deliverables	Unit	Target	Achievement		% of Target
			In October 2018	Through October 2018	
Orientation training for establishing demonstrations	No.	2		2	100%
Farmer training with DAE	No.	60	9	21	35%
<i>Establishment of Field Demonstrations</i>					
Rice (<i>T. Aman</i>)	No.	10		10	100%
<i>Crop Cut Field Demonstration</i>					
Rice (<i>T. Aman</i>)	No.	10	1	1	10%

Media Report

The media campaign for SSMC activities during October 2018 is shown in Table 4, covering electronic and daily local print media. In the media campaign, OCP Foundation, as the donor, is always emphasized along with SSMC activities.

Table 4. Television Reports, News, and Publicity in October 2018

Sl. #	News Heading	Media	Date	Remark
A. Electronic Media				
1.	Organize farmers training at Shahjahanpur, Bogra	Mohona TV	11-Oct-18	09:00 AM News https://youtu.be/9OjUz3qgQQc
2.	Organize farmers training at Gabtoli, Bogra	৯TV	12-Oct-18	05:00 PM News https://youtu.be/VfQeoiCc9zw
3.	Organize farmers training at Sadar, Nilphamari	MKTV (Local)	13-Oct-18	05:00 PM News https://youtu.be/oEUPE_mc7qs
4.	Organize farmers training at Sadar, Dinajpur	Channel i	18-Oct-18	05:00 PM News
5.	Organize farmers training at Gabtoli, Bogra	Mohona TV	19-Oct-18	09:00 AM News

Sl. #	Name of the Newspaper	Location	Date	Remark
B. Local News Paper				
1.	Organize farmers training at Nachole, Chapai Nawabganj	The Daily Chapai Chitra	05-Oct-18	Hard copy of news documented.
2.	Organize farmers training at Nachole, Chapai Nawabganj	The Daily Gaur Bangla	05-Oct-18	Hard copy of news documented.
3.	Organize farmers training at Gabtoli, Bogra	The Daily JaiJaidin	10-Oct-18	Hard copy of news documented.
4.	Organize farmers training at Gabtoli, Bogra	The Daily Mukto Sokal	10-Oct-18	Hard copy of news documented.
5.	Organize farmers training at Gabtoli, Bogra	The Daily Chandni Bazar	10-Oct-18	Hard copy of news documented.
6.	Organize farmers training at Gabtoli, Bogra	The Daily Mukto Zamin	10-Oct-18	Hard copy of news documented.
7.	Organize farmers training at Gabtoli, Bogra	The Daily Shokoler Khobor	10-Oct-18	Hard copy of news documented.
8.	Organize farmers training at Shahjahanpur, Bogra	The Daily Vorer Dak	11-Oct-18	Hard copy of news documented.
9.	The Dainik Juger Alo	Kurigram	30-Oct-18	Hard copy of news documented.
10.	The Daily Prothom Khobor	Kurigram	30-Oct-18	Hard copy of news documented.

Other Activities

- As per decision of the OCP Foundation Third Steering Committee meeting, a revised protocol was prepared and sent to OCP Foundation for approval, and it was finalized. The revised protocols have been forwarded to BARI for conducting trials.
- All the Focal Points of the SSMC project have been invited through formal letters addressed to their respective heads of the institutes for attending the fourth Steering committee meeting to be held at IFDC office on November 18 followed by field trip on 19, 2018. All have confirmed that they will join the meeting.
- Before liming, six composite topsoil samples were collected from six different location before establishing non-rice demonstration plots in October 2018. All the samples were submitted to SRDI regional laboratories at Bogra and Dinajpur for pH analysis.

Photographs of SSMC Activities



IFDC Regional Director of Asia in a Farmers' Training Program at Sadar of Dinajpur in October 2018



Farmers' Training Program at Saidpur of Nilphamari in October 2018



IFDC Regional Director of Asia Monitoring a T. Aman Demo Plot at Sadar of Kurigram in October 2018



IFDC Regional Director of Asia Discussing With DAE Official During Demo Plot Monitoring at Nageshwari of Kurigram in October 2018



Crop Cut from T. Aman Demo Plot at Gabtoli of Bogra in October 2018



Field Day Program After Aman Crop Cut at Gabtoli of Bogra in October 2018