

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

## MONTHLY REPORT | FEBRUARY 2019



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## Acronyms and Abbreviations

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BARI	Bangladesh Agricultural Research Institute
BRI	Bangladesh Rice Research Institute
DAE	Department of Agricultural Extension
FC	Field Coordinator
GAP	Good Agricultural Practice
GOB	Government of Bangladesh
ha	hectare
ICARDA	International Center for Agricultural Research in the Dry Areas
IFDC	International Fertilizer Development Center
IPM	Integrated Pest Management
MLT	Multi-Location Trial
mt	metric ton
NPSB	Nitrogen, Phosphorus, Sulfur, and Boron
NPSZn	Nitrogen, Phosphorus, Sulfur, and Zinc
OFRD	On-Farm Research Division
SAAO	Sub-Assistant Agriculture Officer
SRDI	Soil Resource Development Institute
SSMC	Sustainable Soil Management Component
UAO	Upazila Agriculture Officer
UP	Union Parishad

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

## Monthly Report | February 2019

### Introduction

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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, 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 February 2019.

### Technical Program Activities

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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

In this reporting month, crop conditions in all the on-station and on-farm trials were found in good condition. All 13 on-station and on-farm field trials on potato, maize, wheat, and lentil at different regional research stations and multi-location trial (MLT) sites of Bogra, Rangpur, Nilphamari, and Dinajpur districts were monitored by different On-Farm Research Division (OFRD) scientists of BARI.

## Farmer Trainings

In this month, five batches of farmer training programs were conducted with 150 progressive farmers.<sup>1</sup> Details are presented in Table 1. Of the 150 trained farmers, 108 were men and 20 (13%) were women potato farmers. Five demonstration farmers also attended the training program. In addition, 22 agro-input retailers were present. The training module during the training program included a PowerPoint, an oral presentation, group discussions using the participatory approach, and practical demonstrations on identification techniques of adulterated micronutrient fertilizers. Thirty-nine farmer-training programs on *T. Aman*, lentil, potato, maize, wheat, and *Boro* were completed.

**Table 1. Farmers' Training Organized in February 2019 under SSMC**

Sl. #	Districts	Upazilas	Batches	Male	Female	Total	Fertilizer Retailers	Grand Total
1.	Bogra	Gabtali	1	21	4	25	5	30
2.	Bogra	Shahjahanpur	1	23	5	28	2	30
3.	Dinajpur	Chirirbandar	1	21	4	25	5	30
4.	Kurigram	Nageshwari	1	21	4	25	5	30
5.	Nilphamari	Saidpur	1	22	3	25	5	30
		<b>Total</b>	<b>5</b>	<b>108</b>	<b>20</b>	<b>128</b>	<b>22</b>	<b>150</b>

## Field Demonstrations

In this reporting month, seven SSMC *Boro* rice demonstration plots were established in different locations. Details by district are presented in Table 2. Layout, fertilization, and seed sowing were done properly. The upazila agriculture officers (UAOs), concerned sub-assistant agriculture officers (SAOs) of DAE, and the SSMC field coordinator (FC) actively participated in the activities, such as site selection, layout design, application of fertilizers, seed sowing, and other farm management practices. All 10 *Boro* demonstration plots have been established at this point.

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<sup>1</sup> 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.

**Table 2. Boro Rice Demonstrations Established in February 2019**

Sl. #	Upazila	District	Variety	Target	Established	Date of Transplantation
1.	Gabtali	Bogra	BRRIdhan 28	1	1	Feb. 1, 2019
2.	Gomostapur	Chapai Nawabganj	BRRIdhan 28	1	1	Feb. 1, 2019
3.	Nachole	Chapai Nawabganj	BRRIdhan 28	1	1	Feb. 2, 2019
4.	Shahjahanpur	Bogra	BRRIdhan 28	1	1	Feb. 7, 2019
5.	Chirirbandar	Dinajpur	BRRIdhan 29	1	1	Feb. 8, 2019
6.	Sadar	Dinajpur	BRRIdhan 58	1	1	Feb. 9, 2019
7.	Saidpur	Nilphamari	BRRIdhan 28	1	1	Feb. 10, 2019
			<b>Total</b>	<b>7</b>	<b>7</b>	

### Crop Cuts

In the reporting month, 10 crop cuts from potato demonstration plots have been completed in various locations. SSMC senior staff, FC, DAE officials, union parishad (UP) chairman and members, fertilizer retailers, and concerned demonstration farmers attended the crop cuts and field day programs. It was observed that, in all the demonstration plots, lime-treated OCP compound fertilizers (NPSZn and NPSB) treatment plots performed better than the farmers' practice plot. Yield increased about 3-37% over farmers' practice. Crop yield data by treatment is provided in Table 3.

**Table 3. Results on Potato 2019 Demonstration Crop Cuts Under SSMC**

Sl. #	Location	Variety	T1 (Farmers practice)	T2 OCP Compound + Straight Fertilizer with Lime (NPSZn)	T3 OCP Compound + Straight Fertilizer with Lime (NPSB)	Yield Increase over Farmers' Practice	
						T2-T1	T3-T1
						Percentage	
1.	Gabtali, Bogra	Asterics	35.00	39.90	36.05	14%	3%
2.	Gabtali, Bogra	Asterics	26.00	33.50	31.75	29%	22%
3.	Shahjahanpur, Bogra	Asterics	34.00	35.25	35.75	4%	5%
4.	Shahjahanpur, Bogra	Asterics	28.50	33.90	37.50	19%	32%
5.	Chirirbandar, Dinajpur	Asterics	25.00	32.75	32.25	31%	29%
6.	Sadar, Kurigram	Asterics	35.00	37.50	36.50	7%	4%
7.	Nageshwari, Kurigram	Asterics	30.0	38.25	36.80	28%	23%
8.	Saidpur, Nilphamari	Asterics	34.00	38.80	42.90	14%	26%
9.	Sadar, Nilphamari	Asterics	26.00	34.50	35.50	33%	37%
10.	Sadar, Dinajpur	Asterics	35.11	37.75	43.75	8%	25%

## Field Days

In this month, five potato demonstration field days were organized at Saidpur of Nilphamari, Nageshwari of Kurigram, Chirirbandar of Dinajpur, and Gabtali and Shahjahanpur of Bogra districts (Table 4). SSMC senior staff and FC, DAE officials, local farmers, and fertilizer dealers attended the crop cut and field day programs. A total of 503 farmers attended the field day programs, with 335 men and 146 (29%) women farmers. In addition, 22 agro-input retailers were present. A demonstration farmer shared his experiences with all the participants. It was observed that the yield was higher in all OCP fertilizer treatment plots compared to the farmers' practice plots.

Concern demonstration farmers expressed their opinions about SSMC demonstration plots and the crop performance. Reporters of electronic and local print media attended the field day programs.

**Table 4. Field Days Organized in February 2019 under SSMC**

Sl. #	Districts	Upazilas	Batches	Male	Female	Total	Fertilizer retailers	Grand Total
1.	Dinajpur	Chirirbandar	1	43	52	<b>95</b>	5	<b>100</b>
2.	Bogra	Gabtali	1	79	16	<b>95</b>	5	<b>100</b>
3.	Bogra	Shahjahanpur	1	73	22	<b>95</b>	2	<b>97</b>
4.	Kurigram	Nageswari	1	73	28	<b>101</b>	5	<b>106</b>
5.	Saidpur	Nilphamari	1	67	28	<b>95</b>	5	<b>100</b>
	<b>Total</b>		<b>5</b>	<b>335</b>	<b>146</b>	<b>481</b>	<b>22</b>	<b>503</b>

## Activity Achievement Against Target

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Details of activities completed through February 2019 against the target of the Year 3 Workplan are presented in Table 5.

**Table 5. Activity Achievement through February 2019 Against Year 3 Workplan**

Deliverables	Unit	Target	Achievement		% of Target
			In February 2019	Through February 2019	
Orientation training for establishing demonstrations	No.	2		2	100%
Farmer training with DAE	No.	60	5	39	65%
<b><i>Establishment of Field Trials</i></b>					
Lentil	No.	3		3	100%
Potato	No	4		4	100%
Wheat	No	2		2	100%
Maize	No	4		4	100%
<b>Total</b>		<b>13</b>		<b>13</b>	<b>100%</b>
<b><i>Establishment of Field Demonstrations</i></b>					
Rice ( <i>T. Aman</i> )	No.	10		10	100%
Lentil	No	10		10	100%
Potato	No	10		10	100%
Wheat	No	10		10	100%
Maize	No	10		10	100%
Boro	No	10	7	10	100%
<b>Total</b>		<b>60</b>	<b>7</b>	<b>60</b>	<b>100%</b>
<b><i>Crop Cut</i></b>					
<b><i>Field Demonstration</i></b>					
Rice ( <i>T. Aman</i> )	No.	10		10	100%
Potato	No.	10	10	10	100%
<b><i>Field Day</i></b>					
Field days ( <i>T. Aman</i> )	No.	5		5	100%
Field days ( <i>Potato</i> )	No.	5	5	5	100%



## Media Report

The media campaign for SSMC activities during February 2019 is shown in Table 6, covering daily local print media. In the media campaign, OCP Foundation, as the donor, is always emphasized along with SSMC activities.

**Table 6. Television Reports, News, and Publicity in February 2019**

Sl. #	News Heading	Location	Date	Remark
<b>A. Electronic Media</b>				
1.	Organize farmers training cum field days program at Gabtali, Bogra	NTV news at 5:00 PM	07-02-19	
2.	Organize farmers training cum field days program at Shahjahanpur, Bogra	Mohona TV news at 9:00 AM	28-02-19	

Sl. #	News Heading	Location	Date	Remark
<b>B. Local News Paper</b>				
1.	Organize farmers training cum field days program at Nageswari, Kurigram	The Daily Juger Alo	27-02-19	Hard copy of news documented.
2.	Organize farmers training cum field days program at Nageswari, Kurigram	The Daily Bhorer Darpan	28-02-19	Hard copy of news documented.
3.	Organize farmers training cum field days program at Shahjahanpur, Bogra	The Daily Muktabarta	28-02-19	Hard copy of news documented.
4.	Organize farmers training cum field days program at Shahjahanpur, Bogra	The Daily Mohasthan	28-02-19	Hard copy of news documented.
5.	Organize farmers training cum field days program at Shahjahanpur, Bogra	The Daily Sokoler Khobor	28-02-19	Hard copy of news documented.

## Other Activities

There were 2,603 farmers trained under SSMC as of December 2019. Of them a sample survey of 285 trained farmers are being conducted during *Aman* rice and 2018-19 winter seasons to collect information on result indicators. Up to the reporting month 232 were surveyed. In addition, all village monitoring surveys were completed. All the activities were performed by the FC at various upazilas under SSMC project areas.

Additional Director (Input), DAE, and SSMC senior staff monitored several non-rice demonstration plots at Shahjahanpur and Saidpur.

# Photographs of SSMC Activities



Field Demonstration Plot on Potato at Shahjahanpur, Bogra



Field Demonstration plot on Maize at Shahjahanpur, Bogra



Farmers Training Program on Potato at Gabtali, Bogra



Farmers Training Program on Potato at Nageswari, Kurigram



Crop Cut from Potato Demonstration Plot at Nageshwari, Kurigram



Field Day Program on Potato Crop Cut at Saidpur, Nilphamari