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

Monthly Report
(January and February 2017)

Submitted to
OCP Foundation

by

IFDC
P.O. Box 2040
Muscle Shoals, Alabama 35662, USA

www.ifdc.org

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## Acronyms and Abbreviations

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<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>BARI</td>
<td>Bangladesh Agricultural Research Institute</td>
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<td>BRRI</td>
<td>Bangladesh Rice Research Institute</td>
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<td>DAE</td>
<td>Department of Agricultural Extension</td>
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<td>GAP</td>
<td>Good Agricultural Practice</td>
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<td>GOB</td>
<td>Government of Bangladesh</td>
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<td>ICARDA</td>
<td>International Center for Agricultural Research in the Dry Areas</td>
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<td>IFDC</td>
<td>International Fertilizer Development Center</td>
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<td>ISFM</td>
<td>Integrated Soil Fertility Management</td>
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<td>OCP</td>
<td>Office Chérifien des Phosphates</td>
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<td>OFRD</td>
<td>On-Farm Research Division</td>
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<td>SAAO</td>
<td>Sub-Assistant Agriculture Officer</td>
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<td>SRDI</td>
<td>Soil Resource Development Institute</td>
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<td>SSMC</td>
<td>Sustainable Soil Management Component</td>
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<tr>
<td>UAO</td>
<td>Upazila Agriculture Officer</td>
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Introduction

The Office Chérifien des Phosphates (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 until December 2019. SSMC will address 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).

The goal of SSMC Stage 1 is sustainable management of soil to enhance yields and farmers’ incomes under resilient production systems, which contributes to the overall goal of OCP Foundation’s Agricultural Development Project in Bangladesh.

The objectives of the proposed project are to:

1. Evaluate the role of secondary and micronutrients, including the application of different compound fertilizers, on crop productivity as affected by soil acidity.
2. Promote balanced plant nutrient and good agricultural practice solutions for improving crop productivity, crop profitability, and soil fertility through extension workers and agro-input retailers.

OCP Foundation’s overall 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 system 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 from OCP Foundation and work related to the promotion of (GAPs), entrepreneurship, and farmer organization by ICARDA. The project will target rice, maize, potato, pulses, and to a lesser extent, wheat crops.

SSMC will be implemented together with the 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 will be involved to promote balanced plant nutrient and GAP solutions for improving crop productivity, crop profitability, and soil fertility. The primary approach of the project will be for IFDC to conduct trials with BRRI and BARI and field extension activities with DAE.

SSMC is being implemented in 12 upazilas (sub-districts) of the targeted districts of Kurigram, Nilphamari, and Dinajpur in the Rangpur division and the districts of Bogra, Chapai Noawabganj, and Natore in the Rajshahi division (Figure 1). SSMC activities began in January 2017, as the contract was signed in January. Therefore, this monthly report shows the progress achieved in January and February 2017.

**Rapid Start-Up**

The project start-up activities completed during January-February 2017 included briefings for key GOB agencies; office establishment and furnishing; staff appointments, orientation, and deployment; and establishment of administration and financial procedures. In addition, the start-up activities focused on the following:

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1 The upazilas were selected based on certain criteria: (1) a higher percentage of cultivable land; (2) growth of at least two major crops; (3) a relatively low soil pH level; (4) more progressive farmers; and (5) ease of access to the upazilas for project activity implementation.
Figure 1. SSMC Project Locations
• The Secretary of the Ministry of Agriculture was formally informed about the SSMC launch, with a copy to relevant officers, such as the Chairman of the Bangladesh Agricultural Development Corporation (BADC).

• IFDC sent a request to all relevant government organizations, such as BARI, BRRI, and DAE, to assign a point of contact for smooth project implementation. Accordingly, all three agencies have assigned liaisons, with whom SSMC staff continue discussion of project-related issues.

• SSMC senior staff and OCP Foundation project staff collected a list of all the potential upazilas and agriculture blocks (34) and names of concerned DAE staff (Sub-Assistant Agriculture Officers [SAAO]) as well as their contact numbers from 12 DAE upazila agriculture offices under six districts by the first week of February.

Technical Program Activities

As per the annual Work Plan, major technical activities conducted during the reporting period included the following, which are linked to cropping season and deliverable and aimed at achieving the project goal.

• Baseline Survey: IFDC hired a consultant to conduct the baseline survey for gathering information on current soil fertility management practices, cropping systems, farmer concerns and farmer willingness to pay for inputs, and market requirements and gaps for focal crops. In order to conduct the baseline survey:
  ✓ The SSMC Field Coordinator collected a list of about 40,000 agro-input card holders (farmers) from 34 blocks under 12 upazilas, with the assistance of DAE Upazila Agriculture Officers (UAOs).
  ✓ For conducting the baseline survey, 400 sample farmers were selected from the list of farmers collected from each of the 12 upazila agriculture offices following standard statistical methods. The lists (including sample farmers) were given to the enumerators to conduct the survey activities.
  ✓ Twelve agriculture graduates were appointed as enumerators, including one supervisor, on a contract basis for two weeks to complete data collection using a structured questionnaire and submit the field data as per protocol to the Data Management Unit of the IFDC Dhaka office.
A meeting was held by the project’s consultant and IFDC’s Deputy Director of Asia to finalize questionnaires for the baseline survey at the IFDC Dhaka office. The Bangla version of the questionnaires was finalized after review and modification.

Guidelines were prepared for the enumerators in order to collect accurate information from the respondents (farmers) for the baseline. The guidelines were prepared in Bangla for better understanding of the questionnaire by the enumerators. Questionnaires were printed and an adequate number were given to each enumerator, along with a set of guidelines.

A daylong participatory orientation program for the 12 enumerators and two supervisors was held at IFDC Dhaka office. They were trained in detail on different aspects of the questionnaire. All enumerators were evaluated on their accurate understanding of the questions and guided on the manner in which to ask the questions. The collection of quality data was emphasized, and the enumerators were instructed to not lead or prompt answers from the farmers.

All questions were discussed with the enumerators using PowerPoint presentations and group discussions, and a practical demonstration of accurate completion of the questionnaire was given. The project’s baseline survey consultant, IFDC’s Deputy Director of Asia, and other senior staff were present and participated in the discussion. After the orientation program, the printed questionnaires, guidelines, and a list of the selected farmers were given to the enumerators.

The placement of all enumerators and Field Supervisors to project areas of targeted upazilas in Rangpur and Rajshahi regions was completed.

- **Trials:** IFDC prepared research protocols on omission trials and establishment of balanced fertilization trial plots with rice and other selected crops and consulted with BARI and BRRI scientists and liaisons. Both research institutes provided some thoughts and ideas for better understanding and outcome. Some modifications on balanced fertilization using integrated soil fertility management (ISFM)-related trial programs were made based on suggestions from BARI’s On-Farm Research Division (OFRD) and BRRI’s Soil Science Division.
• **Demonstration Protocol:** IFDC prepared protocols in Bangla for establishing demonstration plots in different locations on six crops (*Boro* and *Aman*, maize, potato, lentil, and wheat). This was discussed with the DAE liaison, the Deputy Director (Extension), Dhaka. IFDC senior staff also discussed this with DAE field-level officials. DAE’s Director General also instructed the concerned UAOs to implement the program with technical support from IFDC.

• **Farmer Training:** As per annual work plan, a draft training module was prepared in Bangla for a farmer training program for all six crops. During implementation of farmer training, the SAAOs of DAE and the Field Coordinator of SSMC will follow the module as per guidelines. SSMC senior staff also completed one training manual. This manual will be used to train about 2,100 famers in 60 batches (each batch is 35 farmers). The division of trainings will be as follows: five trainings per crop before planting (5 trainings x 6 crops in Year 1 = 30 training batches) and five trainings at the time of harvest, combined with field days (5 trainings x 6 crops in Year 2 = 30 training batches).
Photographs of SSMC Activities

Discussion during the enumerator orientation program, February 2017

Group discussion during the enumerator orientation program, February 2017

Discussion during the enumerator orientation program, February 2017

Presentation during the enumerator orientation program, February 2017
Discussion between OCP team members and BARI scientists

Discussion between OCP team members and BARI scientists

Discussion between OCP team members and the DAE Director General

T. Aman rice field in OCP project area