

## Optimising Fertilizer Recommendations in Africa (OFRA)

### Communication Strategy



#### The Project

Optimising Fertilizer Recommendations in Africa (OFRA) is a project seeking to increase crop productivity, profitability, and food security in smallholder farming systems in Africa by optimising fertilizer use within the context of Integrated Soil Fertility Management (ISFM) practices.

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Optimizing Fertilizer Recommendations in Africa (OFRA) project is led by CABI in partnership with the University of Nebraska-Lincoln and National Agricultural Research and Extension Systems in 13 countries in sub-Saharan Africa. The countries include Burkina Faso, Ethiopia, Ghana, Kenya, Malawi, Mali, Niger, Nigeria, Mozambique, Rwanda, Tanzania, Uganda and Zambia. The project is funded by the Soil Health Program of Alliance for a Green Revolution in Africa (AGRA).

#### **Disclaimer**

The OFRA project has been funded by AGRA through the partnership of CABI in collaboration with the University of Nebraska-Lincoln and National Agricultural Research systems of 13 sub-Saharan countries. The content of this document does not represent the official position of CABI, AGRA, University of Nebraska-Lincoln and the 13 NARES, or any other organization involved in the implementation of the project. It has been developed based on the best knowledge of the authors and inputs from partners. The readers thereof use, or refer to the information at their own risk and liability.

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## **1.0 Introduction**

OFRA project aims at increasing crop productivity, profitability, and food security in smallholder farming systems in Africa by optimising fertilizer use within the context of Integrated Soil Fertility Management (ISFM) practices. This will be achieved through promotion of fertilizer use where necessary as recommended to maximize profitability for poor smallholder farmers in 13 Sub-Saharan African countries through best choice of crop-nutrient-rate combinations for a given crop production and agro-ecology situation.

The project undertakes research on fertilizer response curves generated for different crops under different conditions to allow calculation of the maximum economic returns to investment by smallholders. The greatest net returns on a limited investment are obtained by applying the fertilizer at relatively low rates where the response slope is steep. The ratio of fertilizer cost to expected produce value is also to be considered in fertilizer recommendations for smallholders and well-financed commercial farming systems.

OFRA therefore seeks to contribute to other regional initiatives in the area of fertilizer use in sub-Saharan Africa, by foregrounding discussion around smallholder farmer-responsive fertilizer use decision support systems and tools.

The OFRA project incorporates two major components namely, research effort to establish nutrient/ crop responses leading to improved fertilizer use decisions, and a communications effort to increase awareness of the new fertilizer use and decision tools with policy and information delivery.

### **1.1 Purpose of the Communication Strategy**

Success of the OFRA project can only be achieved if there is increased awareness regarding research that establishes crop responses to different levels of fertilizers application, and the recommendations thereafter. There is, therefore, need for timely and sustained flow of information and messages across all stakeholders who include smallholder farmers, agricultural extension service providers, fertilizer manufacturers, farmer organizations, research scientists and policy makers and implementing partners.

The strategy will support implementation of the project across all the five objectives namely,

1. To improve use of research data to support fertilizer recommendations
2. To increase use of spatial information for extrapolating nutrient response functions and decision tools for optimizing fertilizer use by farmers
3. To improve relevance of fertilizer recommendations in ISFM framework for stakeholders
4. To improve access to information and communication materials for extension.
5. To improve project management and oversight.

A strong communication strategy is, therefore, important to ensure smooth information flow among project partners (including smallholder farmers) to support coordination. In addition, the strategy will ensure that all external audiences including sponsors and partners are aware of the progress and achievements. The strategy will ensure that smallholder farmers and other stakeholders who stand to benefit or are affected by poor use of fertilizers remain sufficiently informed and engaged. Finally, the communication strategy will support the project overall goal which is to achieve sustainable agricultural growth through improved farm-level profitability and productivity.

## 1.2 The context

OFRA is being implemented in the 13 countries in Africa with common contextual factors which among others include:

1. Low yields because of poor use of fertilizers
2. Low and inefficient use of fertilizer because of lack of research based information
3. Poor fertilizer recommendations because of lack of research on specific crops
4. Lack of nutrient response data which should lead to fertilizer use recommendation
5. Inadequate policy provisions for soil health management
6. Inadequate information and awareness on the role of Integrated Soil Fertility Management in leveraging the benefits of fertilizer recommendations
7. Gender inequality in access to information among women and men smallholder farmers

## 1.3 Objectives of the Strategy

In direct support of the five objectives of OFRA, the objectives of the communication strategy are:

- To inform OFRA partners, supporters and beneficiaries of activities, progress and outcomes throughout the project period.
- To promote information for extrapolation of nutrient response functions and decision tools for optimizing fertilizer use by farmers.
- To provide smallholder farmers and extension agents (agricultural professionals) with appropriate information on fertilizer recommendations in ISFM framework.
- To provide policy makers with information on the need for research and fertilizer recommendations.

## 1.4 Expected Outcomes

- Adequate dissemination of project information including fertilizer recommendations and ISFM techniques among all OFRA partners, supporters, and other interested parties.
- Increased awareness on the state of soil fertility needs in particular areas and appropriate fertilizer recommendations for particular smallholder farming communities.
- Increased support from policy makers for the implementation of regulatory tools and policies intended to promote integrated soil fertility management and fertilizer recommendations.

## 2.0 Strategic Approach

The purpose of the OFRA communication strategy is to raise awareness, understanding and support for the project throughout its development by specifying how the key messages will be managed and communicated to identified target audiences. The strategy is also designed to help ensure that coherent messages emerge from OFRA. The strategy should put in place a series of communication approaches to facilitate the adoption, development and implementation of fertilizer optimization recommendations and tools at smallholder farmer level in 13 countries in sub-Saharan Africa. It will also encourage information exchange between the partners to share results, data and learning.

OFRA operates in Burkina Faso, Ethiopia, Ghana, Kenya, Malawi, Mali, Niger, Nigeria, Mozambique, Rwanda, Tanzania, Uganda and Zambia.

It is estimated that there are 126 million farmers in these countries and so the potential communication task is huge. These farmers speak multi-languages beyond the four official languages of English, French, Kiswahili and Portuguese and local delivery partners will be critical to onward dissemination and customization of the messages. The new fertilizer recommendations envisaged by OFRA will, most likely, necessitate changes in policy and practice in some of the countries. It is therefore essential to the success of OFRA that targeted

and timely information reaches policy makers, private sector agro-input suppliers, government and NGO extension workers, farmers and farmer organizations and universities, colleges and training providers and others. These target audiences are essential to OFRA in putting research into use at scale.

This communication strategy therefore seeks to:

- Support knowledge exchange amongst the partners working on the OFRA research and development pilot – many to many communication
- Build capacity of project stakeholders to package key messages
- Service the funders and technical advisory group with meaningful information that can support active debate and the refinement of learning
- Provide access to data and findings emerging from the OFRA project
- Build awareness amongst key target audiences of the work of OFRA
- Support changes in policy and practice emerging from this knowledge
- Document the OFRA journey in print, pictorial and audiovisual.

## 2.1 The Scientific approach

Analysis of existing data supplemented with new data from on-station and on-farm nutrient response trials (using standard protocols) of different crops in a range of agro-ecological zones lays the foundation in developing fertilizer optimization tools.

National agriculture research and *extension* systems across the 13 countries are working with CABI and UNL to conduct field research to obtain information needed to provide the necessary data to generate fertilizer response curves required for fertilizer recommendations to optimize on-farm profitability of fertilizer use.

The research covers the main food crops including:

**Cereals:** Finger millet, maize, pearl millet, rice, sorghum, wheat, barley and teff

**Roots and tubers:** Cassava

**Legumes:** Beans, chickpea, cowpea, groundnuts, pigeon pea, faba bean and soybean

Fertilizer response trials by country and crop	Zambia	Mozambique	Malawi	Ghana	Nigeria	Niger	Mali	Burkina Faso	Uganda	Tanzania	Rwanda	Kenya	Ethiopia
Maize													
Sorghum													
Pearl millet													
Finger millet													
Teff													
Irrigated rice													
Rain-fed rice													
Beans													
Groundnut													
Soybean													
Pigeon pea													
Chickpea													
Cowpea													
Cassava													
Barley													
Wheat													
Faba bean													

## 2.2 Target audience and key messages

A principal focus of this project is on developing new fertilizer recommendations and carrying out the necessary research to obtain crop-nutrient response functions that can be used to make recommendations that maximize returns on investment both from an agronomic and economic point of view for the farmer.

At the same time, the project will also contribute to widespread dissemination of findings a) by developing communication materials targeted at relevant audiences (direct beneficiaries) and b) by raising awareness and training direct beneficiaries in their use. Some of the direct stakeholders targeted by project activities will include grantees of complementary projects and programmes funded by AGRA, governments and other donors that have a mandate for dissemination.

The collaboration between OFRA and ASHC will ensure that there is a continuous link between the generation of the information materials by the project and their dissemination. Partners' information outlets will be used alongside the traditional ASHC website.

Key messages emerging from the OFRA project are likely to include:

- OFRA develops fertilizer recommendations that support farmers to create profit, not just production.
- That more efficient use of fertilizer is better for the environment.
- Phone apps will enable extensionists to support farmers to make the best investment in fertilizer to maximize their food security needs and profit.
- Incorporates ISFM to customize fertilizer recommendations further.
- That the data collected in 13 countries by OFRA partners will represent a unique resource on nutrient response function which will be available for the benefit of future research programs in Africa and beyond.

## 3.0 Main Approaches

The different categories of OFRA audience necessitate an eclectic mix of communication channels for appropriate delivery. The choice of channels is informed by the need for effectiveness and efficiency, cost-effectiveness, relevance, and outreach. Country contexts will inform most choices of appropriate channels. The list below highlights some of the communication channels that will be used for different groups and messages.

### **3.1 OFRA Newsletter**

An internal newsletter of the project that highlights partners' activities showcases success stories and communicates overall project implementation. The main target of the newsletter will be the key stakeholders with sufficient access to Internet including internal particularly, and external (in general) audiences.

### **3.2 OFRA Video documentary/video clips/youtube**

A yearly 20 minutes documentary will showcase success stories from different countries. This will enable partners to have a visual collection of what is happening in different countries, on different sites, varied challenges and opportunities specific to different sites, thus giving a full picture of the project. Short video clips (5 minutes) can be used by stakeholders as a reference for case studies when making presentations in different forums. The clips will be uploaded on the internet as youtubes for easy access worldwide.

### **3.3 OFRA Blog**

Given that OFRA is a short term project, a blog will be sufficient enough to communicate externally. The blog can either be hosted by the CABI website, or can be independently hosted by Google or Wordpress. The blog, among other things will address both internal and external communication needs of the project. It will feature project news, case studies, youtube clips, policy advocacy messaging, special interest forums, farmer testimonies, project document and publications repository, photo galleries, and media centre among other important features. The blog is a critical aspect of the Knowledge Management needs of OFRA.

### **3.4 Thematic Policy briefs**

There will be targeted policy briefs to be produced regularly to focus attention on the key policy issues emerging from project experience. Significantly thematic areas in soil health management and fertilizer recommendations, lessons for extension services strengthening, soil quality monitoring and other key issues will be highlighted in the policy briefs.

The briefs will be produced by selected partners and consultants based on their comparative knowledge in the chosen thematic area. Policy briefs will be disseminated through diverse approaches including, print, electronic, presentations, posters and panels. The policy briefs target various stakeholders and particularly policy makers from the Ministries of Agriculture in the participating countries.

### **3.5 Thematic workshop**

Thematic workshops will be organized around priority topics emerging from the project experience. Across all objectives, topics covering ISFM, research, fertilizer recommendations, policy analysis among others will be discussed in the workshops. These target academic, research and policy makers and farmer representatives from all the 13 countries.

### **3.6 Radio**

Radio availability in all the target countries is a significant opportunity. Community radio and FM stations constitute a key source of information especially for small holder farmers in rural areas. In some countries like Kenya, estimates put radio access (especially FM stations) above 70% for rural audiences. Key partners will be identified including Ministry of agricultural extension officers to develop appropriate radio campaigns to disseminate information based on the OFRA project. Experts will be expected to participate in live talk shows as a way of disseminating information about ISFM and fertilizer recommendations based on experiences.

### **3.7 Manuals, handbooks and guidelines**

For extension personnel working closely with the farmers, a set of materials including handbooks, guidelines and manuals will be appropriately packaged to form effective toolkits to support smallholder farmer's decisions. The manuals will be prepared based on instructional communication frameworks to ensure that they maximize sharing of both technical and practical information to the users. The expertise of various information repackaging institutions and individuals will be sought to develop these materials.

### **3.8 Communication materials for Interactive Field days**

The diffusion of knowledge and information on fertilizer recommendations especially for smallholder farmer depends a lot on effective on-site demo activities. A component of the communication strategy will involve supporting dissemination teams to design farmer friendly information materials and below the line communication tools such as posters, and audio-visual materials (videos, etc). Dissemination of these materials will be done through extension service providers, farmers forums, and farmer field days among other avenues.

### **3.9 Technical and non-technical factsheets**

In order to enhance awareness and address information needs of various stakeholders, factsheets will be produced focusing on key topics on fertilizer recommendations and ISFM. Unlike policy briefs, factsheets will seek to convey information aimed at increasing understanding and use of fertilizers as recommended based on research. These will target, agro-dealers, farmers, and extension service providers.

### **3.10 Virtual networking and Social media campaigns**

Special interest groups in OFRA will require targeted forums to allow for discussion and diffusion of technical and scientific information of commercial products. On the OFRA blog, a virtual forum will be created to accommodate topical discussion on soil health and fertilizer recommendations. In addition to the blog, effective social media including twitter and Facebook will be used to carry interest group-based messages. The virtual and social media campaigns are highly targeted to researchers and policy makers.

## **4.0 Monitoring & Evaluation**

To measure progress on communication activities, the OFRA project will adopt a core set of indicators based on the overall monitoring framework of the project. The indicators will seek to measure level of diffusion of project messages among the key audiences. Monitoring activities will be undertaken quarterly in line with the reporting timelines of the overall project. The indicators will be developed based on the overall result framework of the project. Tentative generic output indicators include:

- Number of Information materials produced and disseminated on fertilizer recommendations.
- Number of articles about fertilizer recommendations in print, online and electronic media.
- Number of smallholder farmers reached by materials developed.
- Number of tools/manuals/guidelines produced based on OFRA and ISFM.
- Number of communication plans developed.

## **5.0 Implementation plan**

### **5.1 Strategic Objectives**

- To promote fertilizer recommendation approach in the context of ISFM among key stakeholders
- To inform OFRA partners, supporters and beneficiaries on project activities, progress and outcomes throughout the project period

- To provide policy makers with information on importance of fertilizer recommendations
- To provide smallholder farmers and extension agents (agricultural professionals) with appropriate information on optimization of fertilizer recommendations in the context of ISFM

### Implementation matrix

Activity	Time Frame			Indicators	Means of verification
	Year 1	Year 2	Year 3		
OFRA blog				Number of articles posted on the blog	Number of people visiting the blog (page views)
Thematic workshops				Number of workshops conducted and number of participants	Workshop report
Radio shows and call in sessions with soil health experts				Number of radio show per country	The audience reached
Development of technical and non-technical factsheets				Number and themes of key messages developed	List of messages
Thematic policy briefs				Number of policy briefs developed	Number of briefs disseminated
Development of manuals, handbooks and guidelines				Number of themes and handbooks developed	Number of handbooks disseminated to the key audience
Communication materials for interactive field days				Key messages and number of communication materials developed	Number of materials disseminated
OFRA Newsletter				Number of success stories published in the newsletter, and the number of newsletters produced	Number of newsletters disseminated to partners, stakeholders and key audiences
OFRA Video documentary, video clips and youtubes				Number of clips produced	Number of clips used in forums and number of clips uploaded to the internet for a wider audience.

## 6.0 Conclusions

OFRA project clearly draws attention of diverse type of audiences ranging from the farmer, research scientists, policy makers, agricultural extension service providers, development partners and the private sector including fertilizer manufacturers and agro-dealers among others.

It is therefore very important to understand the levels of interest for every player, whether positive or negative so as to know how to develop messages that will help the project move forward. It is also important to understand that OFRA project operates in 13 Sub-Saharan African countries, which have totally different sets of agricultural policies. That means, at some point, while using this strategy, there will be need for developing specific messages for specific countries to fit specific situations.

Ministries of agriculture in the target countries are the custodians of agricultural policy provisions which may include promotion of use of fertilizers, and fertilizer subsidy programs. For this reason, they will be actively interested in the lessons and experiences of the project and how these can inform/improve policy. Communication activities targeting the ministries will seek to convey key lessons, and policy-oriented messages on optimization of fertilizer recommendations with a clear focus on indicating the value-added by the project interventions.

Dealing with smallholder (mostly financially constrained) farmers, it is important to understand that most of them are not innovators/market leaders, and therefore, they will need evidence based messages for easy adaptability. That is where the newsletter with success stories comes in handy.

The private sector within the project context consists of fertilizer suppliers, manufacturers, and private research institutes/organizations involved in various aspects of fertilizer production and marketing. Aspects of the OFRA project involve sensitizing stakeholders on the importance of fertilizer recommendations. It is possible that both supportive and unsupportive responses can emerge from private sector actors. Communication activities targeting this group will aim to demonstrate the business sense of using fertilizers as recommended in the context of ISFM to create a level playing field.

Communication activities for this project will therefore aim to inform, educate, and demonstrate the need for fertilizer recommendations and its link with improved yield and incomes. Some of the tools to be used for driving the message home, as recommended in country reports include use of posters, manuals (for extension, farmers, cooperatives), audiovisual means, flipcharts, factsheets, online forums, newsletters, FM radio programs and short advertisements among others.