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## Feed the Future Nigeria and Nestlé Maize Quality Improvement Partnership

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Cooperative Agreement No. AID-620-LA-17-00002

### YEAR THREE WORK PLAN

(Covering October 1, 2019 to June 5, 2020)

#### Delivered to:

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## Acronym Table

CBO	Community Based Organization
EA	Extension Agent
GAP	Good Agricultural Practices
KADA	Kaduna State Agricultural Development Agency
LGA	Local Government Area
NYSC	Nigeria's Youth Service Corps

## Introduction

The Feed the Future Nigeria and Nestlé Maize Quality Improvement Partnership between USAID/Nigeria and Nestlé Nigeria, PLC and implemented by CNFA aims to enhance quality, safety, and transparency in Nigeria's grain supply chain through a whole-of-supply-chain approach

As a partnership between USAID and Nestlé, the project aims to meet the commercial and corporate social responsibility goals of Nestlé and USAID's development objectives. Communication and agreement on clear expectations among all parties is crucial for the successful implementation of the project. The annual workplan is one tool to ensure agreement on the goals and activities for the upcoming year.

The year 3 workplan covers a period of October 1, 2019 – June 5, 2020. In the final year of the program, the project will focus on closing out activities and ensuring sustainability.

## Program Description

The project works with multiple stakeholders, including smallholder farmers, input suppliers, grain aggregators, Nestlé, and local governments to improve the quality and quantity of maize and soybeans in the Kaduna State by decreasing levels of aflatoxins, fumonisins, and aluminum. This is done through a comprehensive mapping exercise that identifies areas of high levels of contaminants followed by training and support at each level of the supply chain to reduce levels of contamination to meet high quality standards such as those required by Nestlé. Trainings manuals have been developed by program partner, Purdue University. Over the life of the project, over 30,000 beneficiaries are being trained by project staff and local volunteers in effective mitigation measures to reduce the levels of key contaminants in maize and soybeans, increasing the available supply of safe, high quality maize and soybeans.

### 1. Technical Activities

During year 2, the project implemented activities in 120 communities in three zones of Kaduna State (Maigana, Lere, and Samaru). In Maigana zone, project activities were implemented in 63 communities under eight Local Government Areas (LGAs). The LGAs are Kudan, Makarfi, Sabon Gari, Soba, Zaria, Giwa, Ikara, and Kubau. In Lere, activities were implemented in 36 communities under three LGAs (Igabi, Kuaru, and Lere). In Samaru, implementation of activities commenced in 21 communities in three LGAs (Sanga, Jama'a, and Zangon-Kataf). A total of 29,501 farmers, 122 agro-input dealers, six Nestlé aggregators, 15 non-Nestlé aggregators, 994 service providers, 158 grain suppliers, 83 commercial warehouse owners, and 1,644 members of 82 community-based organizations (CBOs) were trained on how to mitigate targeted contaminants.

In year 3, all zones, LGAs, communities, and beneficiaries will be maintained. The activity will go on to buttress year 1 and 2 progress by strengthening current stakeholder consultations and dialogue to fortify relationships with value chain actors, as well as other stakeholders (e.g. other implementing partners, state government officials, local government entities) to ensure a holistic and sustainable approach towards reducing levels of contaminants in both maize and soybeans.

The project will facilitate linkages between beneficiaries. Farmers will be linked with agro-input dealers where they can get inputs for their farms, and agro-input dealers will be linked to producers of high quality inputs that facilitates the direct supply of high quality products. Lead farmers and lead agro-input dealers will be further trained to take leadership in extending technical information to farmers. Lead farmers will be encouraged to aggregate grains at the community level, which will allow for better selling prices.

To ensure previously trained farmers are engaged in the promoted practices and technologies, farmers at different communities will be visited regularly and dialogues on good agricultural practices (GAP) will emphasize methods of planting, drying, storage, threshing, and how to control pests. Project-supported extension agents (EAs) and lead farmers will lead this activity as they have been trained on these practices and they in turn have trained the beneficiaries. The aim is to identify the difficulties beneficiaries encounter in the implementation of GAP and develop ways to mitigate these issues before the end of the project. This will ensure sustainability as the EAs will continue to support the farmers as part of their routine duties, even after the project ends.

Similarly, both Nestlé and non-Nestlé aggregators will receive regular visits to ensure the knowledge gained from the trainings they received is routinely being cascaded to staff. The aggregators will manage trainings on capacity building for their members, while the project team will supportively supervise the trainings that will be conducted till a routine is established to ensure sustainability.

Along with grain aggregators, farmers, and wholesalers, the activity will ensure continuous mobile contaminant testing throughout the year to monitor contaminant levels and demonstrate the value of grain testing to these stakeholders.

### **Component 1: Capacity Building of Smallholder Farmer Suppliers**

In years one and two the project trained 32,523 beneficiaries on the requisite GAP and technologies, including smallholder farmers, farm laborers, aggregators, agro-input dealers, middlemen, wholesalers, CBO, and owners of commercial warehouses.

In year three, the project will conduct follow-up visits with previously trained farmers and farm laborers on the adoption of new practices as a means of reinforcing long term capacity. Demonstration plots in lead farmer fields established in year two in different communities will be overseen by the EAs. As a means of showcasing the benefits engaging in the promoted behaviors and preserving the gains of the activity beyond its lifespan, stakeholders' forums and approximately 20 farmer field days will be held periodically. These farmer field days will allow beneficiary farmers to visit demonstration plots to exhibit GAP and the benefits of implementing these practices.

Monthly town hall sensitization meetings will be held with farmers on the mitigation of contaminants to expand awareness of GAP in the community. Ongoing oversight and monitoring of farmers by volunteers and project staff will continue in the third year, where observation and correction on farmers' practices will be done onsite. This will ensure farmers are engaged in the appropriate practices to ensure mitigation of contaminants.

During the 2019 harvest period, farmers will be monitored on proper harvesting and threshing techniques which can minimize contamination. This has been shown to be a key point in the supply chain where contamination can be mitigated and not spread further along the supply chain. During this time, project staff will conduct testing of grains from the demonstration sites as well as farmer fields to show how incorporating GAP can help in reducing contaminants levels.

### **1.1 Training Toolkit for Farmers**

#### *Use of sampling and testing to direct project priorities*

While the testing modules for aflatoxin and fumonisins were calibrated and finalized in year 2, the new aluminum testing module continues to have issues. While calibrations for the aluminum testing module continue, the project will explore other testing technologies and opportunities for aluminum testing. Where feasible solutions are found, they will be promoted to aggregators for use in their warehouses.

As a result of Mobile Assay trainings for Nestlé aggregators received in year 2, most of the tests being conducted since then have been done by aggregator staff, with project staff playing only supervisory roles. The Training and Volunteer Coordinators will continue to monitor aggregators as they conduct the testing in their warehouses before the grains are supplied to Nestlé. The project will also facilitate relationships between aggregators and companies providing testing technology and cleaning and sorting machines. In collaboration with Nestlé staff, the project will encourage those five aggregators that are yet to purchase contaminant testing kits, as well as machines for the cleaning and sorting of grains to do so for their own benefit as Nestlé plans to begin demanding all grains have been mechanically cleaned and sorted for the 2020 harvest.

There will be extension visits to beneficiaries to test contaminants in stored grains. The project will conduct the tests and at the same time train the non-Nestlé aggregators on fumonisin and aflatoxin mitigation. These non-Nestlé aggregators will be linked with Mobile Assay and other testing technologies and will be encouraged to purchase the technology.

In year 2, the testing of grains at farm sites has been a challenge because the Mobile Assay testing tools need a conducive environment with a given temperature to give accurate results. In year 3, the project will work with Mobile Assay to see how grains can be tested at the farmers' sites effectively. When this is done, testing of grains at farm sites will regularly be conducted. Alternatively, farmers' grains will be collected, properly labelled, and tested at the activity offices in Maigana and Saminaka.

### **1.2 Capacity Building and Empowerment of Market Intermediaries**

In the third year, the project will continue to work with the six Nestlé aggregators, 15 non-Nestlé aggregators, and 83 commercial warehouse owners on how to maintain good quality grains at collection centers and warehouses as well as on establishing physical standards for grading of grains. Most of these actors are now aware of targeted contaminants and have knowledge about what a standard warehouse should include and proper management practices to mitigate contaminants. Some of the actors still have

challenges with poor ventilation, unhygienic environments, poor grain storage practices, and unacceptable relative humidity levels and humidity monitoring.

The project will continue with weekly visits to all these groups to see that they adopt the practices that they were trained on and these issues are addressed. A monthly activity plan, which will include topics like warehouse management and quality-based purchase standards, will be jointly established with each group and each month each group will be evaluated against the plan. The activity will also work with aggregators to train their agronomists to cascade the knowledge they receive to farmers, to test grains for contaminants prior to sending to Nestlé for pre-shipment and sharing the results, to promote the investment in color sorting machines, and to map out the various communities that can supply them with high quality grains.

### **1.3 Agro-dealers Empowered to Promote Mitigation Products**

During the second year the activity worked with 122 agro-input dealers. All of the agro-input dealers were trained on the following: safe handling of inputs, dealing with counterfeit and illegal agro-inputs, major pests and diseases of maize and soybeans, and business management best practices.

In the third year the project will expand monitoring of dealers that began in year 2, visiting different dealers regularly to assess their adoption of best practices. Those dealers that adopt these practices will be linked with project farmers and other value chain actors who purchase agro-inputs, which will provide a financial incentive for dealers. These dealers will also be linked with major agro-input supply companies to facilitate their ability to stock high quality inputs. Dealers who show good adoption of best practices will be trained to serve as extension agents for beneficiaries. High performing agro-input dealers will be linked to Feed the Future Nigeria Agri Business Investment activity to enable them to have access to loans to help in expanding their businesses.

### **1.4 Communications and Outreach to Reinforce Learning**

During year 2, a Hausa radio program titled *Ku saurara manoma* was aired throughout the project area with 1,131,073 regular listeners. The airing of this radio program will continue in the third year.

The use of WhatsApp in sharing information and technologies with beneficiaries and other stakeholders continued during year 2 of the project, which increased awareness of how to mitigate contaminants. This will continue in the third year, with such topics as grain storage at farm level, role play activities to show farmers the impact of mycotoxins on humans and livestock, grain quality improvement practices, best practices for harvest and post-harvest operations, proper grain handling and management sequences, and procedures and precautions for safe and efficient transportation of grains.

In addition, use of text messaging was introduced year 2, with 2,297 total recipients. This number is expected to increase significantly in year 3. Recipients will include farm laborers, grain store owners, aggregators and staff, grain merchants, farmers, agro-input dealers, and community leaders. In the third year the activity will expand membership to foster awareness of contaminants and mitigation techniques.

Topics will include types of quality storage facilities (e.g. hermetic storage), managing aflatoxin and fumonisins during grain drying and storage, management of storage facilities, and why and how prices of agricultural commodities change.

### **Component 2: Capacity Building of Local Organizations**

During the second year, members of 82 of CBOs were trained on the detection and mitigation of targeted contaminants, management and leadership of cooperatives and groups, financial management, and cooperative marketing of agricultural commodities.

In the third year, the activity will continue to work with the CBOs at their monthly meetings to ensure they re-train other members on GAP. Dialogue and awareness creation through the use of existing posters and pamphlets will be used during year 3 to mitigate contaminants in grains and improve the overall capacity and management of these groups.

### **Use of Volunteers**

During the second year, a total of 25 qualified NYSC members were recruited as volunteers. Twenty of them were posted in the Maigana zone and five in the Lere zone. They have received an introduction to project activities and have been trained on contaminant mitigation strategies at each stage of the growing season, major pests and diseases of maize and soybeans in Nigeria, group dynamics and conflict management, and sustainable group formation and management. During year 3, NYSC members and EAs will continue with weekly field visits which will provide technical support to farmers and other beneficiaries on contaminant mitigation. NYSC members and EAs will be trained in topics that include:

- Proper site selection and land preparation to mitigate inoculums of toxigenic fungi
- Guiding farmers to select and plant certified seeds that are resistant to toxigenic fungi
- Good planting and fertilizer application practices to ensure right plant population density
- Controlling fusarium and aspergillus ear rot diseases in maize by applying Aflasafe
- Controlling weeds and insect pests to build plant resistance towards fungal diseases
- Good harvesting and post-harvesting practices like sorting bleached maize ears
- Good warehouse management and safe handling of grains
- Proper bagging of grains to prevent dust accumulation after cleaning and bagging.

These trainings will be flowed down to farmers, aggregators, input suppliers, and other market intermediaries through the volunteers and EAs during their field visits.

### **Stakeholder Engagement**

In year 2, stakeholder dialogues were held to provide an update on the progress made so far, to obtain feedback from the stakeholders, and to share ideas with them on best ways to sustain the activities. In the third year, the project will continue to facilitate collaboration and interactions between stakeholders. There will be regular stakeholder consultation and dialogue in each LGA to discuss methods of ensuring the support received through the project will be sustained after the project ends. Stakeholders will include



Kaduna Agriculture Development Agency (KADA), Ministry of Agriculture, Chairmen of LGAs, aggregators, traditional leaders, religious leaders, and lead farmers.

Sensitization meetings on contaminant mitigation with community and religious leaders will be held at the community level. Where possible, the activity will conduct sensitization sessions in the local markets with traders and buyers on contaminant awareness and mitigation. This will increase awareness on mitigating contaminants. The project team will conduct regular advocacy visits to LGA Chairmen on sustainability mechanisms and how they can ensure extension agents will continue to train beneficiaries on contaminant mitigation. This will provide a structured process for all stakeholder groups to continue to be engaged after the project ends.

Bi-yearly reviews of activities with government stakeholders will be conducted to ensure that relevant and wider issues affecting the project can be integrated into the decision process, thereby fostering mutual understanding and closer collaboration. The project will also work with the Partnership for Inclusive Agricultural Transformation in Africa project to strengthen government participation. Project staff will hold quarterly review meetings with the master trainers for aggregators and lead farmers who are supported by the project to discuss the progress made during each quarter and ensure that all identified gaps in implementation are addressed. The meetings will focus on planting, drying, storage practices, threshing, and how to control pests to achieve the final goal of contaminant mitigation.

### **Plan for project close**

In order to ensure an effective close out, activities will be phased out over the last three months of the program. Throughout year 3, EAs and NYSC volunteers will serve as the primary method of extension advice and training for beneficiaries. While program staff will provide oversight and monitor these trainings to ensure proper technical knowledge is shared, it is important to empower the volunteers in the final year to ensure they are able to continue providing similar services after the project ends. The last round of trainings will take place in February. Oversight and support of EAs and volunteers will be phased out in April 2020 and zonal offices will be closed in early May. Final data collection will take place during April and a beneficiary assessment of the project will be conducted to identify achievements made for the final report. A final close out event that promotes the technical messaging of the program and brings together stakeholders will be held in May.

## **2. Cross-Cutting and Administrative**

### **Gender**

During the first and second year, 10,988 (32.7% of the total) female beneficiaries were trained on different methods of contaminant mitigation. The project team made a deliberate effort to identify and register female farmers. In the third year, the project will maintain all female beneficiaries and take steps to continue to improve their capacity and ensure full benefit of the gains of the project. The project team will conduct supportive supervision visits on safe harvesting to female farmers on threshing, sorting, packaging, cleaning, and storage of grains. The team will emphasize the importance of effective cleaning

and sorting of grains traditionally done by women at the collection centers to minimize aluminum in soybeans and fumonisins in maize.

### **Youth**

In the second year, the project saw that agriculture holds considerable potential to provide gainful employment opportunities to a large number of youth with a total of 35.4% (11,918) of youth beneficiaries. The project trainings have enhanced their capacity on the services they render as farm laborers and smallholder farmers. The third year the project will have more dialogue, town hall, and sensitization meetings that target youth. These meetings will focus on the planting, drying, storage, threshing, and pest control for grains to ensure they continue to mitigate the level of contaminants in grains.

### **Monitoring and Evaluation**

In the third year the M&E team will manage the collection, verification, and reporting of project data to measure activity outputs and outcomes. Regular beneficiary assessments will be conducted at the end of each quarter to track the progress being made. Results of these assessments will be discussed at various review meetings with key stakeholders to be held each quarter.

In year 3, the M&E team will conduct organization capacity assessment of aggregators, commercial warehouses, and CBOs. These processes will contribute in tracking the adoption of promoted practices and technologies. Data quality assessments will be conducted in December and March to assess the quality of data reporting in preparation of final collection and reporting of results.

### 3. Timeline of Activities

Comprehensive Activity List	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020
<b>Stakeholder Outreach</b>									
Stakeholder consultation and dialogue									
Quarterly review of activities with beneficiaries									
Stakeholders' forum									
<b>Training Activities</b>									
Training and re-training on site selection, land clearing, land preparation, and pre-planting activities									
Training and re-training of farmers on harvest and post-harvest activities (including monitoring for Aspergillus and Fusarium infected cobs)									
Training and re-training of aggregators on post-harvest handling and warehouse management									
Re-training of agro-input dealers on agro-input handling and management									
Training and re-training of CBOs on group dynamics and conflict resolution									
Re-training of extension agents/volunteers on contaminant reduction and group management									
<b>Building Capacity of Farmers and Farm laborers</b>									

<b>Comprehensive Activity List</b>	<b>Oct 2019</b>	<b>Nov 2019</b>	<b>Dec 2019</b>	<b>Jan 2020</b>	<b>Feb 2020</b>	<b>Mar 2020</b>	<b>Apr 2020</b>	<b>May 2020</b>	<b>Jun 2020</b>
Conduct of town-hall sensitization meeting to farmers on mitigation of contaminants									
Ongoing oversight and monitoring of farmers by volunteers and project staff									
Airing of radio program									
WhatsApp messages and use of SMS									
Link community-based input dealers with major input companies									
Link farmers to aggregators									
Facilitate the establishment of association of lead farmers									
<b><i>Agro-Input Dealers Outreach</i></b>									
Link community-based agro-input dealers with major input companies									
<b><i>Building Grain Aggregator Capacity</i></b>									
Testing and grading of grains at aggregators' warehouses									
Testing of grains before purchase of farmer grains									
Establish standards for grading of grains									

<b>Comprehensive Activity List</b>	<b>Oct 2019</b>	<b>Nov 2019</b>	<b>Dec 2019</b>	<b>Jan 2020</b>	<b>Feb 2020</b>	<b>Mar 2020</b>	<b>Apr 2020</b>	<b>May 2020</b>	<b>Jun 2020</b>
Support aggregators to develop certificate or receipt for quality grains for farmers									
Train aggregator agronomists on GAP									
Train aggregator warehouse managers on warehouse management									
<b><i>Building Capacity of Grain Warehouse Owners and Middlemen</i></b>									
Testing of grains at commercial warehouses									
Link community-based commercial warehouse owners and middlemen with major input companies									
<b><i>Building Capacity of CBOs</i></b>									
Organized forum on beneficiaries' linkages									
<b><i>Gender</i></b>									
Conduct supportive supervision to women/youth on safe harvesting, threshing, and cleaning methods									
Create awareness of dangers of contaminants to youth at different communities									
Linking women/youth to hermetic bag producers									
<b><i>Monitoring and Evaluation</i></b>									
Conduct of quarterly beneficiaries' assessment									

<b>Comprehensive Activity List</b>	<b>Oct 2019</b>	<b>Nov 2019</b>	<b>Dec 2019</b>	<b>Jan 2020</b>	<b>Feb 2020</b>	<b>Mar 2020</b>	<b>Apr 2020</b>	<b>May 2020</b>	<b>Jun 2020</b>
Conduct of organization capacity assessment to aggregators									
Conduct quarterly DQA to zonal office.									
Conduct end of project beneficiary/impact assessment									