



## Osun State Home Grown School Feeding Program: Improving Sustainability through Increased Local Farmer Participation

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### Abstract

This report contains the findings and recommendations to determine ways to increase the integration of local farmers into the Osun State School Feeding Programme (SFP). The authors explored various options that allow the SFP to accomplish this goal while ensuring no disruption to the delivery of nutritious meals to the schools.

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## 1. Executive Summary

Home Grown School Feeding Programs (HGSFPs) provide communities the opportunity to achieve progress in the pursuit of educational objectives and overall economic growth. The primary goals of school feeding programs worldwide are to reduce hunger, enhance cognitive development, increase enrollment and improve business prospects for the local agriculture sector.

In Nigeria, Osun State is the only state that has a school feeding program (SFP) due to the strong insistence of local communities and support from current state government leaders. However, the program's major challenges include securing ongoing funding and increasing local smallholder farmer participation. It is believed that improvements in these two areas will enable the Osun program to be sustainable in the future. The eventual hope is that the Nigerian federal government will roll out legislation for a national school feeding program and Osun State's successful model will be the standard.

This report contains the findings and recommendations from a study performed by MBA students from the University of California, Berkeley Haas School of Business in Spring 2012. The Berkeley team's role was to assist Partnership for Child Development (PCD) in determining ways to increase the integration of local farmers into the SFP. The team explored various options that allow the SFP to accomplish this goal while ensuring no disruption to the delivery of nutritious meals to the schools. Two weeks of fieldwork in-country included visits to numerous state government ministries, public schools, farmer's associations and food distribution centers within the six health zones of Osun State.

A high-level investigation into the programmatic and financial impacts of increased local farmer integration was assessed with recommendations as outputs, highlighting five key integrated areas that could facilitate the increase of small farmer participation in the SFP:

1. **As an incentive for participation in the SFP, government subsidizes can be provided to small farmer co-operatives for space in regional storage facilities. Farmers can also use subsidies for the transportation of products to storage locations or for shipping products to markets.** To supply school feeding programs, farmers must be able to

minimize losses and maximize returns. Food storage systems address both needs. At the time when crops are harvested, commodity prices are low. Only a few months later the prices start to increase.<sup>1</sup> Both the government and local farmers in Osun State have an interest in improving price stability and thus enabling a more robust food security program.

2. **The menu designed and mandated by the SFP should be redesigned for flexibility that accounts for seasonality and regionally grown crops.** Currently, the Osun State school lunch menu does not allow for much substitution, so cooks are forced to pay for the increasing price of commodities. Catering to the farmer's yield can actually serve as an incentive because demand will be available for a larger variety of their produce year-round. Also, providing more options increases cooks' bargaining power, thus leading to overall cost reductions for the SFP.
3. **In order to minimize disruption to the current Osun State system, an effective way to assimilate farmers is to facilitate negotiations with food vendors at co-op level.** This ensures the farmers' fresh produce gets sold and minimizes cooks' profits lost to middlemen. The goal is to encourage the formation of business relationships between cook and small farmer co-ops, resulting in private contracts for direct buying negotiated by both parties' leadership. By establishing a communication channel at the co-op level, farmers are provided with a predictable demand curve and a cost-efficient way to adjust supply to the aggregated demand of the food vendors'. If properly mobilized, school feeding programs can create substantial demand for local agricultural products and make an significant impact in the livelihood of local small farmers. However, existing systems will need to be transformed to meet that demand.<sup>1</sup>
4. **Benefits for participating in the program should be relayed to the farmers through effective awareness and educational initiatives.** By forming relationships with farmer co-operative associations and initiating broadcasts over mass media outlets (i.e. radio and TV), agricultural government agencies can communicate the financial, ancillary, and

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<sup>1</sup>Global Child Nutrition Forum, 2010. The Multi-Sectoral Approach: Linking Health, Nutrition School Feeding and Local Agricultural Production, GCNF.

social benefits of participating in the SFP. The farmers can also be taught how to navigate the network of government agencies to effectively accomplish their objectives. Currently, food vendors are being trained upon hire on food quality, hygienic handling and preparation. The program should also implement refresher courses prior to the start of each school term. These training programs can include sessions that provide cooks with an understanding of their opportunities for entrepreneurship; basic negotiation skills and how to better aggregate their demand. This initiative empowers women in the community with tangible skills that benefit society beyond the SFP.

5. **It is recommended that the current governing systems for the Osun State SFP be redesigned to allow for increased accountability at both the school feeding program (O-MEALS) level and government agency level.** First, transparent roles and responsibilities should be communicated throughout the system that reduces the redundant layers of oversight. This should be followed by a clear implementation plan and schedule that connects to the economic and agricultural developments forecasted by the state. Strong leadership in the program is critical for driving these initiatives forward. An important goal for the future is to ensure that the current political buy-in from the government translates into clear actions aimed at program sustainability.

Finally, continued work to create implementation plans for at least two of the five recommendations will be completed by students from Osun State University (UniOsun) over the next four weeks, under the supervision of PCD staff and Osun State University faculty.

## 2. Introduction

The status of a child's nutritional health has a tremendous impact on how well he or she performs in school. Weak health and poor nutrition among school-age children diminishes their cognitive development and reduces their ability to participate in the classroom. School Feeding Programs (SFP) across the world have been launched to improve the quality and efficiency of education for children from developed and developing countries. The programs primarily achieve this goal by alleviating short-term hunger, thus allowing the child to concentrate better. They also motivate parents to send their children to school regularly and increase community involvement in schools. These programs have been implemented worldwide for a number of years with varied success. There has been much research collected relating to the methodological approaches, and overall impact and effectiveness of these programs.

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*“Home grown school feeding brings together two existing and highly politicized programs—agricultural development and school feeding. The initiative does not entail creating new programs, but involves linking farms and schools in a way that combines and strengthens existing programs. Understanding HGSF as a supply chain that begins with the farmer and ends with a child enables policymakers and program managers to develop a coherent, well-structured program.” (GCNF, 2010)*

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### 3. Project Overview and Objectives

#### 3.1. Partnership for Child Development

In developing countries, management of school feeding programs is usually a collaboration between the national government and other organizations; the largest being the United Nations World Food Program (WFP), which operates in over 80 countries. The Partnership for Child Development (PCD) is a non-profit organization which partners with social organizations, academic institutions and technical experts based at the Imperial College in London. They are able to bring together academics, governments and international organizations to achieve the goals of Home Grown School Feeding (HGSF).

PCD helps governments create and manage their own sustainable home grown school feeding program. Through PCD's technical expertise in assessing national programs worldwide they have developed a reliable framework that can be customized to score the readiness level of a nation's SFP. They work to identify gaps and limitations in a country's system and then provide assistance to the country by recommending policy activities that provide for a financially sustainable program.

#### 3.2. School Feeding in Osun State, Nigeria

In 2004, the Federal Government of Nigeria initiated a national home grown feeding initiative with the Universal Basic Education (UBE) Act. The national school feeding program was to be a phased approach, providing one meal a day to primary school children within 13 selected Nigerian States (Abuja, Bauchi, Cross River, Enugu, Imo, Kano, Kebbi, Kogi, Rivers, Ogun, Osun, Nasarawa, and Yobe). However, out of the 13 original pilot programs in Nigeria, Osun State is the only one still operational, a result of strong community and

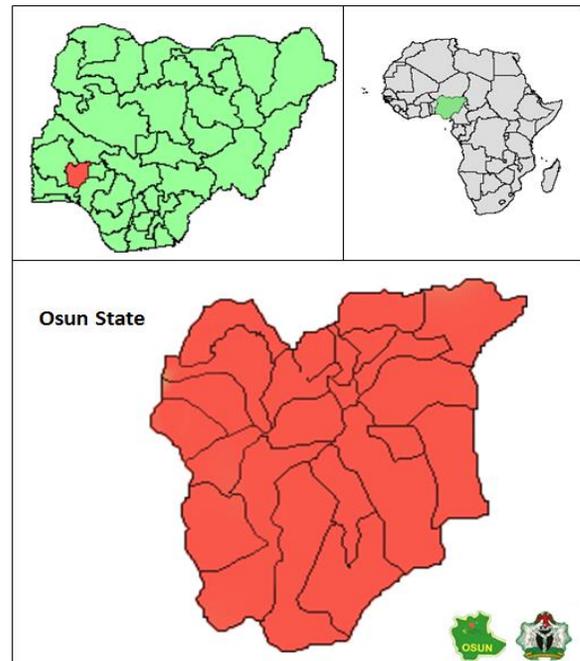


Figure 1: Map of Osun

political support and institutional management, something that other states lacked.

Osun State SFP is currently serving over 155,000 children in primary school grades 1-3 in all 1,382 public schools across the state. Each child is provided with one cooked meal per day. One cook (commonly referred to as 'food vendor') prepares meals for an average of 50 students, adhering to a preapproved menu mandated by the program. In order to meet the dietary requirements of the menu, 40% of the SFP funds for food purchases are spent on protein (poultry, chicken and eggs), procured to the program through consolidated farmer associations at regional distribution centers. The remaining 60% is spent on non-perishable staples such as vegetables and fruit. The Osun State SFP (O-MEALS) ensures cash is transferred every 2 weeks into designated bank accounts for each cook. The cook is then able to purchase the decentralized food items at regional markets. It should be noted that the local small agriculture sector is yet to be fully integrated into the school feeding program.

Although Osun is a model of a working program in Nigeria, there are still opportunities to improve the program such as increasing program efficiency and accounting for hidden costs, developing legislation to secure ongoing funding and linking local smallholder farmers into the program.

Other than Nigeria, SFPs can be found in pilot phase all across Africa, including Togo, Ghana, Kenya and Tanzania. Each country faces different challenges and is achieving various degrees of success. However, one of the lessons learned from the diverse choice of implementation models is that, despite many of these challenges being shared across programs in different countries, no solution is one-size-fits-all. The model selected depends to a great extent on the specific socio-economic, cultural, political and institutional environment where the program is implemented.

As an example, below we highlight two approaches taken by two countries respectively, regarding the role of farmers in their SFPs in order to illustrate the differences between them and add a new perspective to our discussion.

The SFP in Ghana currently addresses the issue of small farmers access to the local markets by running two different implementation plans in different locations. The first one utilizes buffer stocks as a means to guarantee a steady demand from the State that can absorb

the farmers’ excess of production. The second one revolves around facilitating a stakeholder roundtable where farmers and food vendors can meet to draft a master contract for direct buying. Among the numerous stakeholders encouraged to attend are the Ministry of Agriculture, who provides pricing information, and a bank consortium, which provides alternative funding.

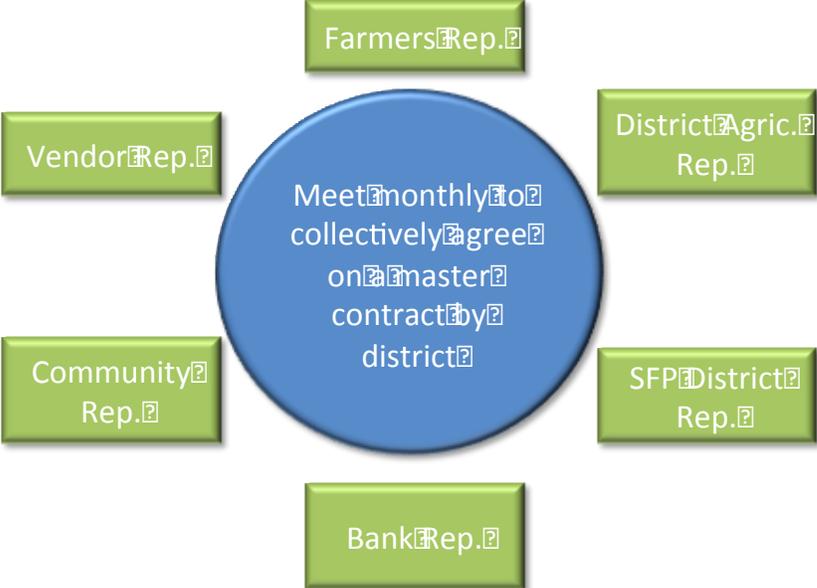


Figure 2: Ghana roundtable

In Togo, the SFP does not need to address specifically the issue of farmers’ access to local market, which is relatively immediate for two reasons. On one hand, access to market is regulated by small traders, who are the intermediaries the food vendors purchase the food from to prepare the meals for the kids. It is important to note that many farmers and small traders are in fact family. On the other hand, farmers already supply a great majority of the products demanded by the food vendors, which reduces the need to set in place mechanisms to achieve a better alignment between farmers and cooks interests. This state of almost perfect complementary supply-demand is made possible due to the fact that the program *does not mandate a specific menu* the food vendors must adhere to.

**3.3. Objectives & Methodology**

PCD has identified the need to assist the Osun State government in increasing the participation of local farmers in the Osun State SFP. PCD has contracted the Berkeley International Development (IBD) team to research and develop recommendations regarding options to accomplish this goal. The Berkeley Team's approach was to perform a high-level analysis of the SFP's overall model in order to ascertain the potential impacts related to the goal of increased farmer integration.

### *3.3.1. Goals*

The Berkeley IBD Team goal was to provide recommendations for increasing farmer integration in the SFP, the team performed a high-level analysis of the SFP's overall resource model in order to ascertain the feasibility and programmatic impacts related to increasing smallholder farmer participation.

The following deliverables were completed by the IBD:

- Presentation and Report Detailing: Recommendations of options for increasing farmer integration into the SFP
- High-level assessment of the programmatic and financial impact of farmer integration into the SFP
- Plan for transitioning work to the UniOsun team

A draft of the roadmap for the implementation of the recommendations provided by the IBD team is to be carried out by a team of four students from Osun State University (UniOsun) under the supervision of PCD.

### *3.3.2. Methodology and Activities*

The last part of the project consisted of three weeks of field research based in Osogbo, Osun State. By visiting each of the six health zones (Ilesa, Ife, Ede, Ikirun, Iwo, and Osgobo) and twelve out of the state's 30 local governments, the IBD team gathered field data driven evidence to gain a deeper understanding of the socio-economic demographics across the state for each of the interviewee groups.

The UniOsun team supported the IBD team in the field collecting data that would be utilized later to formulate the final recommendations. The UniOsun students also helped with the interpretation in those interviews not conducted in English.

At a field level, the IBD team relied on observational research, both participant and non-participant, formal ethnographic interviews and intercepts to gather information about the interaction among stakeholders (primarily children and food vendors) and the setting where this took place (school or the marketplace). The team interviewed numerous farmers' co-ops representatives; visited local markets and interviewed market queens; visited 20 rural and urban schools and, at each location, interviewed the head master, the children, one representative from the Parents and Teachers Association (PTA), the Planning Officer, the food vendors assigned to that school, and occasionally, food vendors visiting from schools nearby. The IBD team also visited one distribution center at the time of the day when protein distribution was actually happening. Due to time constraints and distance, it was not possible to visit any farm or government silo where farmers store their crops. The ethnographic approach of our research was completed with the contribution of the UniOsun students, whose translation effort not only facilitated overcoming communication barriers but also allowed for a more nuanced understanding of cultural subtext.

At a government institutional level, the IBD team visited numerous ministries and state government agencies interviewing their representatives, including O-MEALS team members and Program Manager, Local Government Chairmen, First Bank Officials, OREAP, OSSADEP, the State Planning Commission, Ministry of Agriculture, Ministry of Education, Ministry of Finance, Ministry of Health, Ministry of Commerce and Ministry of Home Office, Culture & Tourism.

Among the topics addressed in our interviews, we highlighted the following:

- Infrastructure: Energy, storage, transportation, cooking equipment
- Food Supply Chain: Quality assurance, availability, location, seasonality, nutritional value
- Financial: Contracts, budgeting, bank information, statements & documents, availability, barriers to access
- Other: Co-ops registration, licensing, incentives, oversight & coordination

## 4. Overview of Current Food Value Chain

### 4.1. Stakeholders Analysis

#### 4.1.1. Relationship Between Stakeholders

Besides the active institutional support at the state level, many key elements have significantly contributed to the success of Osun State School Feeding Program as the only school feeding initiative still operational in Nigeria. First, its framework of checks and balances provides a robust governance model that enhances transparency and accountability. Moreover, the delegation of responsibilities to the food vendor and the involvement of the community in monitoring and evaluation (M&E) activities creates a strong sense of ownership in the program. The role of the community representatives, Parent Teacher Associations (PTA), School Board Management Committees (SBMC), Local Government Authorities (LGA) and school feeding program staff are instrumental to the relationship of different program stakeholders and the overall success of the program.

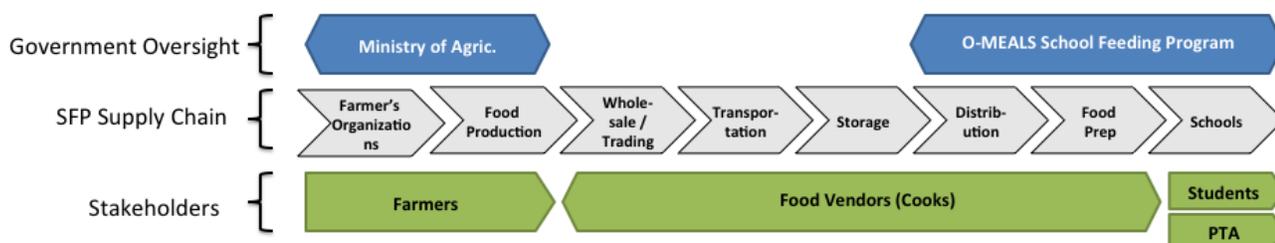


Figure 3: Osun SFP Stakeholders

The program has been diligently making adjustments to address inefficiencies. However, a framework that supports the integration, participation and program awareness of the local, small farmers has yet to be created. A lot can still be done in regards to the food procurement model to reach a balance between the degree of engagement of small farmers in the food sourcing process and the cooks' need to provide the elements for a cost-efficient and wholesome diet.

#### *4.1.2. Food Vendors (Cooks)*

The cooks in the school feeding program are women from the local community. As such, they feel a strong sense of obligation to provide balanced and healthy meals for the children, who often include their own children and those of friends. Cooks receive a direct payment into their personal bank account every two weeks of about ₦33 per student per meal. Many cooks report spending more on ingredients than their allocated budget, although it is not clear exactly how much due to inaccurate or nonexistent recordkeeping. Additionally, there is an over-supply of potential cooks, so they have very little negotiation power to request a budget increase when market prices fluctuate.

As a result, the cooks must rely on the program office and the government to look out for their interests. The benefits of the program to the community will quickly be negated if it is found to be bankrupting its employees. Additionally, cooks are incentivized to purchase the cheapest possible items and often cannot select locally grown or the most nutritious options in the market. There is little regulation on the portions the children receive, and the program typically relies on a sense of obligation to require the cooks to provide as much nutrition as possible.

#### *4.1.3. Small Farmers*

We focus our analysis on the subsistence farmers in Osun State because the commercial farmers do not need the support of the SFP. Small farms are operated in a manner that allows them to squeeze by in the marketplace, but they are unable to get the full value of their crops. Water and fuel supplies are limited and expensive, making production of crops themselves a challenge. Once they have managed to obtain these vital resources, the farmers find they lack another: cash. They must purchase seeds and other planting equipment on credit, often pay their laborers in crops, and then selling the product immediately to repay creditors. Additionally, even for those without cash-flow problems, few have access, or can afford, storage facilities for their products, making harvest time the only opportunity to sell. All of these obstacles combine to essentially put the farmers at the mercy of the market queens. They are the sole customers who can purchase full truckloads of crops, be trusted to have

payment ready, and near enough to make deliveries feasible. However, this also means that small farmers must essentially accept whatever price the market queens are willing to pay, and have little negotiating power.

#### *4.1.4. Communities*

The community's contribution to the program is currently demonstrated through active participation at different levels. The community at large provides representatives for the PTA, as well as provides supervisors that monitor quality and quantity of the portions given to the children.

The PTAs play a critical role in supporting the engagement of the community within the program. The PTAs work with the community gathering information on potential cook candidates. This way, the PTA ensures that there is buy-in from the local community at large, parents and teachers in the process of electing and replacing the cooks. The cooks themselves are employed from within the local community, ensuring that the employment generation benefits revert in the community as well.

## **4.2. The Governing System**

The Osun State Elementary School Feeding and Health Programme (O-MEALS) is the central office of the Osun State SFP. O-MEALS is responsible for all monitoring and execution activities. The office consists of civil servants and government officers assigned from relevant ministries in the state government (i.e. Ministry of Health, Education and Agriculture). In March 2012, an organized workshop was held with stakeholders in the state government to discuss future potential collaborations for the SFP.

The Program Manager is the head of O-MEALS office. His responsibility is to coordinate and oversee all aspects of the program. He also communicates directly with the state governor's office by sending reports and updates. Directly under the program manager, the state operations officer is in charge of communicating with functional officers within the O-MEALS office and relevant government officers in the external ministry. He/she keeps track of program status by collecting reports indicating the number of pupils in primary 1-3, number of cooks, quality of prepared meals, and market price of the product to maintain the operational

level of SFP.

The O-MEALS educational office takes responsibility to employ and educate cooks. The hiring process includes communicating through media, collecting and reviewing application forms, interviewing applicants, and organizing education programs.

A steering committee for the Osun State SFP is comprised of representatives from the O-MEALS office and the Ministries of Finance, Commerce, Agriculture, Health and Education. The role of the Steering Committee is to manage and guide the decisions of the SFP at a high-level. The Steering Committee reviews monitoring reports sent from the O-MEALS and meets monthly to discuss. As of the time of this report, the Steering Committee has yet to meet this school term.

#### **4.3. Payment System**

The school feeding program in Osun State is funded 60% by the state and 40% by the Local Governments. Payments to the vendors for food purchases are disbursed from a master loan taken by the state with First Bank. The state takes on the interest on that loan. This loan provides the funds that are utilized by cooks for their food purchases. In order to access the funds, cooks must be members of a cooperative, organized geographically with approximately 25 members each. The cooperative account is credited with funds biweekly, and then the money is distributed among cooks via personal bank accounts. The funds in one vendor's account are available 24/7 and may be withdrawn via ATM machines or in person in local bank branches at the vendor's convenience. The amount each vendor receives is proportional to the number of children that the vendor is assigned, ₦50 per student per day. However, the government has made the decision to centrally procure the majority of the proteins for the vendors. Chicken, beef and eggs are purchased centrally for ₦21, ₦21 and ₦20 respectively. Since chicken appears on the weekly menu twice and beef and eggs once each, ₦166 per student is deducted from the cook's biweekly budget. The cooks then travel daily to one of nine distribution centers across the state to collect their proteins daily. Any funds that a cook does not spend on food, food preparation, and transportation is her profit from the program.

Two contingency mechanisms have been allocated to provide the paying system with more flexibility under unexpected circumstances regarding the release order and the amount to be released. First, First Bank can replenish the vendor's bank account up to four consecutive weeks without an explicit order from the Governor's Office. Second, the amount released can be adjusted to reflect the increase in school enrolment. The process to trigger said adjustment in the amount allocated to the bank account is triggered by a change in the number of student enrolled in primary 1 to 3 in public schools across Osun state. The Governor's Office authorizes an increase of funds to be released to the vendors' bank accounts upon receiving a report addressing said changes in enrolment that carries the signature of the O-MEALS Program Manager.

By enrolling in the program, each vendor is automatically liable for a loan repayment through First Bank in exchange for cooking utensils used every day to prepare the SFP meals. The utensil loan is payable over three years, with vendors making payments of ₦576 to a First Bank branch every two weeks. This payment schedule corresponds to a 3% interest rate on the ₦41,000 principal value of the provided utensils.

The intention was for cooks to also use this equipment in a personal catering business that they operate outside of the SFP. In fact, the majority of the incentives for vendor participation center on this assumption. Cooks were organized into cooperatives in order to encourage collaboration both within the SFP and in their entrepreneurial efforts. To further encourage this behavior, the government has made interest-free loans available for cooks to use as rent payments for a storefront. Each cook has access to ₦24,000 to pay for one year's rent on a shop she can use as a restaurant. To qualify a cook needs to complete the necessary paperwork, and include the word "O-MEALS" in her shop name.

In our research we have seen very few examples of cooks with other businesses outside the SFP, primarily because they do not have time to work another job, or any interest in entrepreneurship. The few we spoke with who had time for an extra business had difficulty obtaining the rent loan because the paperwork was funneled through their local government officers, who were slow to move the process forwards.

#### **4.4. Food production**

##### *4.4.1. Farming in Osun State*

The Osun State Agricultural Ministry targets production of ₦350M per day. Although the school feeding program has a daily consumption rate of ₦7.5M per day, the government has other, loftier reasons to increase agricultural output besides the SFP, including selling to other states and providing storage facilities to which farmers can contribute and increase state-wide food security (reduces risk) during high demand periods

Nearly 70% of the agricultural sectors in Osun are smallholder farmers. From our interviews, we found that the government has recently launched a series of communication campaigns (via radio jingles) to increase sensitization of farmers to the state production targets. Radio is the best form of mass communication for news. Interestingly, all of the farmer co-ops we spoke to have regular communication with the government agricultural agencies and most have heard of the Osun SFP. However, there has been no communication to educate farmers on specific incentives of producing for the SFP.

Through the OREAP program, farmers are encouraged to form co-ops of at least 10 smallholder farmers in their community with similar crops and interests. Co-ops are encouraged to register themselves. A co-op can indicate the amount of acres it has and how much they can produce in the registration documentation. An agreement is then negotiated between the co-op and the government on how much the co-op will produce and the loan amount.

The input costs for farmers can be subsidized through government agencies for items such as tractors (OSSADEM) and farm inputs (OSSADEP). The government has also initiated a free land-clearing program. Through co-ops they have access to credit for tractors, light processing machines, seeds, fertilizers and chemicals. The “loan” amount is deducted when a farmer uses a service. There is hardly any cash in hand given except for larger scale farmers who have collateral. The Ministry of Agriculture is adverse to distributing cash directly to small farmers due to misappropriation fears. Farmers pay back the “loan” by handing the equivalent value of crops to the OREAP after harvesting, but also have flexibility to sell their

crops in markets to pay back the cash.

Farmers in Osun state currently sell directly to the government, local and out of state traders, and processing facilities and breweries. Some farmers have challenges with selling excess crops during low demand periods and transportation of their goods to trading and storage outlets. They currently have little access to storage facilities, as the government program just began. There are government silos and warehouses over the state; however, most are already full or located far from each farm.

#### *4.4.2. Food Production for School Feeding Program*

Distribution of crops for the SFP takes place through the local trading/market outlets in the community. Prices in the market are determined by demand, transportation costs, and markups from the market queens.

Seasonality of some crops (i.e. yam) affects the end price in the market. Prices for these items can be more than doubled off peak season. For example, in Iwo State we visited a local market where the yams were imported from Abuja because they currently don't grow in Osun. Also, school vendors in the community complained of the high yam prices and the fact that they are on the menu twice per week, as this cuts into their profit.

### **4.5. Food Procurement**

#### *4.5.1. Vendors in the School Feeding Program*

Another initiative of the SFP is to empower women in the community. The role of a food vendor is a well sought after job for women in the community and there is a cook waiting list. The O-MEALS office indicated that if a cook is not performing her job, she is removed immediately and there is always someone else ready to assume her position.

Women become aware of the program through a newspaper application. A health screening at University of Osun or evidence of a physical from a government hospital is prerequisite. The screening must not come from a private hospital for fear that the results could be compromised. Through a visual inspection performed by the O-MEALS office, the cooks have to be abled-bodied women and majority fall within the age range 25-40. The cooks

are required to have at least a high school level education and are required to provide a Senior Secondary School Certificate (SSC). The challenge is finding vendors in the rural communities that meet this level of education. O-MEALS works around this by discretionally accepting vendors with a lower level of education.

Prior to assuming the job, cooks receive one week (5hrs/day) of training through O-MEALS where they are taught food nutrition and safety, hands-on preparation techniques and sanitation requirements. The agenda did not contain a session on practical business skills such as money management, pooling, entrepreneurship or proper record keeping. There are talks of scheduling refresher courses each year during the fall holiday season (off-season).

In the previous administration, cooks prepared lunches in the school kitchen. However, they were mandated to cook in their own homes this year because the school kitchens are not fit to cook in and lack nearby access to water. We also noticed the dilapidated condition of the school kitchens on many of our visits. However, we should note that the decision to mandate that cooks prepare meals at home has been controversial. In some instances, PTA representatives and head masters have expressed concern about not being able to inspect the process of preparing the meals and the catering location.

One of the benefits of being a part of O-MEALS for cooks is supposed to be access to personal business loans through their co-op. However it is important to note that none of the vendors we spoke to currently receive loans from the government through their co-op. In fact, many cooks complained that they do not have enough time to manage another job due to the time spent gathering food for SFP each day. For the most part, cooks seem to lack basic entrepreneur skills. Although it should be noted that we found cases of certain “business savvy” co-ops that manage to pool their bi-weekly pupil funds to aggregate food purchasing power, and provide loans to certain members to run personal businesses (ex. Local Authority Primary School in Ada, Ikirun zone). The Ministry of Commerce indicated that there are 138 cooks’ co-ops currently in Osun state.

#### 4.5.2. Food Procurement Process

Vendors source the ingredients required in the SFP menu through various channels. Poultry, beef and eggs have centralized distribution and are picked up by the vendors from the distribution center assigned to their school the day before such ingredient is required by the menu. In certain local government areas, the Planning Officer himself dispatches the poultry, beef or eggs to the Local Area Government office, where the food vendors pick it up.

Poultry, beef and egg sourcing relies on management from the private sector. Chicken is provided through one company (Tuns) that manages a host of local poultry suppliers. Eggs are sourced through the Yamfi Farm while beef is sourced through the Meat Seller Association (ONTIRI). The funds for these perishables are deducted from the ₦50 per child per day, leaving the vendor with approximately ₦33 per child per day to cook's allotted amount and they are left to procure the remaining menu items in the local market

Vendors occasionally buy fruits from their neighbors in the local community when available. Where possible, they store the ingredients for the meals to be served the following day at their homes, in a freezer. Those who do not have a freezer simply put it on a high shelf or in a bucket with water to keep it away from pests and rodents. The ingredients are never stored for longer than one night before being cooked, which helps to maintain the quality of the meals provided.

#### 4.6. Food Cooking & Delivery

The vendors prepare meals in their homes as mandated by the current school feeding program guidelines. The food is cooked on a daily basis and distributed among the children at lunchtime.

The vendors are expected to follow the menu required by the O-MEALS program. However, the vendors are given flexibility to substitute some fruits to keep the food cost within the daily budget. Since the re-establishment of the program, no vendors have reported needing to substitute ingredients despite the rise in price of some vegetables due to seasonality. The vendors have been able to absorb price increases by cutting into their margin, and in some instances, by using their personal savings with the hope that future 'profits' will make up for the current loss.

Occasionally, the ingredients sourced from the distribution center do not arrive on time for the vendors to pick up and bring to their homes before sunset. In such cases, they will try to include those ingredients in the meal they will prepare two days later.

The 10-20% weekly increase in enrollment experienced since the program's inception is placing program resources under stress. Particularly, the vendors are forced to dole out smaller portions than initially planned, or use their own savings to provide the intended portion size.

#### **4.7. Reporting and Oversight**

All of all the following supervisory entities take an active role making sure that the quality and quantity of the food provided to the O-MEALS programs meets the standards set by the program across the 30 local government areas.

##### *4.7.1. School-level Monitoring*

This monitoring body is in charge of tracking the primary 1 through 3-student enrollment. The school-level monitoring team comprises reps of the PTA and the school Head Master or Mistress. A report signed by the Head Master or Mistress is issued once a week, where daily attendance is tracked and the health teacher acknowledges the meals prepared for the vendors meet the program's standard.

##### *4.7.2. SUBEB Monitoring Team*

The State Universal Basic Education Board monitors and controls the operation of primary schools in Osun State. Its main functions comprise providing instructional material for the pupils; appointing, promoting and paying teachers; and issuing disciplinary action if need be. One planning officer, who is the SUBEB representative assigned to that particular area, supervises each of the Osun state 30 local government offices. Once a week, the Planning Officer signs off the enrolment form presented by the Head Master or Mistress and delivers it to the O-MEALS Program Officer. The SUBEB Monitoring Team meets once a month and reports to the SUBEB Executive Secretary.

#### *4.7.3. LIE (Local Inspectors of Education)*

These delegates of the Ministry of Education monitor the quality of teaching imparted at not just at primary level but all school levels. Additionally, they support the O-MEALS program by helping monitor the quality and quantity of food provided to the children. There is one LIE rep per each of the 30 local governments.

LIE hold meetings regularly at the local zones and once a month in the Permanent Secretary Ministry of Education, with reps of SUBEB as well as Teaching Service Commission (in charge of secondary education).

#### *4.7.4. ZIE (Zone Inspectors of Education)*

The ZIE reps are senior officers from the Ministry of Education that supervise the activities of the LIE body. There are six ZIE reps covering all 30 government local areas. Each ZIE rep oversees five LIE reps. They attend the meeting at the Permanent Secretary described above once a month.

#### *4.7.5. Monitoring Committee*

Consists of 23 members representing the local community as well as different branches of the state government, including Agriculture, Health, Finance, RUWESA (Sanitation), Commerce, PTA, NYAC (National Youth Service Core), Women Affairs, NAFDAC (National Food and Drug Admin Control), Education, nutritionists, UNOSUN Faculty of Agriculture, Director from Office from the Deputy Governor and an auditor from the Ministry of Education. The committee members have a supervisory role, visiting schools where the O-MEALS program is currently implemented.

They hold meetings once a month organized by O-MEALS, with a special emphasis on meeting at the beginning and the end of each school term.

#### *4.7.6. O-MEALS: Osun School Feeding Program Office*

The O-MEALS program office responsibilities include recruiting the food vendors and providing them with comprehensive practical training on hygienic food handling and preparation; supply of cooking utensils; supply of centrally distributed food; budget creation and execution of

payments to food vendors through bank; coordination of monitoring committees; provision of uniforms and caps; handling of contracts for centralized food and garment; medical certificate & SSC checks; planning and execution of continuous training; and workshop for head teachers training for effective monitoring and food-related hygiene.

As far as oversight is concerned, the O-MEALS office role is twofold. First, it aggregates monitoring reports issued by the Planning Officers, LIE and ZIE reps and the Monitoring Committee, and fills the Steering Committee in on the program status and issues. Second, it collects the attendance forms delivered by the Planning Officers across the state and reports the Governor's office on enrolment progress. This provides an insight on the program's short-term goal accomplishment measurement. It also allows obtaining approval from the Governor's office to release funds from the contingency funds provision to align current budget needs with available funds.

## **5. Recommendations for System Improvement**

Given the current state of the program, there are many areas that need attention. In considering the three primary aims of the SFP: student health, enrollment, and local farmer enrichment, we felt that the third was the least addressed by the existing program structure. We therefore decided to focus our efforts on this area as a way to ensure an impact from our work. In the field, we saw strong evidence to back up this assumption as many farmers told us they were unaware of how to participate in the SFP, and had not heard that they were included in the program goals. In addition, farmers were not impressed by the small increase in demand that the SFP would bring, and expressed their distrust for government-organized programs because of problems encountered in the past.

Taking all this into account, we developed five recommendations to improve the incorporation of local farmers into the SFP. First, farmers need to have an incentive to participate in the program, which can be achieved through providing subsidies for storage and transportation, as well as modifying the menu to encourage more local purchasing. Next, there needs to be education and sensitization of both farmers and cooks on the benefits of coming together. We then recommend facilitating these connections by leveraging the existing vendor and farmer cooperatives. Finally, the governance and monitoring of the program should be streamlined to ensure efficient flow of information to government stakeholders.

### **5.1. Incentivize Farmers**

If substantial, the steady demand generated by SFPs can be a motivation for farmers to participate in the program. However, considering the fact that farmers have access to several other sales channels and Osun State is targeting other large agricultural opportunities, it is not clear whether the demand from the SFP alone is strong enough incentive to encourage farmers' participation in the program, especially when weighed against the barriers to entry.

The Ministry of Agriculture is targeting a daily agricultural production of ₦350 million while the SFP generates only ₦7.5 million of the daily consumption. One must keep in mind that while this demand could make a significant impact to the income of the subsistence farmer, mobilizing a sufficient number of farmers into the program could create several logistical

challenges for the state.

Through our fieldwork, we found smallholder farmers to be very business minded and motivated to increase their production, while at the same time they are eager to obtain resources for initial expenses and cost reductions for expansion.

One of the major challenges for small farmers is that they have little control over the wholesale price of commodities. In the field we interviewed a co-op of small farmers in Oshogbo who produce 35 bags of beans (50 kg ea.) every season. The head of the co-op mentioned that they are forced to sell at a low price because the market price is low during harvest season. Also, due to market saturation, they can only supply a small amount of crops. Consequently, they do not have much negotiation power over buyers. However, if they had access to storage and transportation, they would have the flexibility to stockpile their harvests and wait until the market price becomes higher before they sell.

Although the government already provides silos and warehouses across the state, many farmers we interviewed mentioned that the silos are already full and the locations are too far from their farms. We recognized that more support from the government as it relates to transportation and storage would increase the profitability of small farmers and we recommend that the government leverage these needs in order to motivate more small farmer participation in the SFP.

#### *5.1.1. Storage Subsidy*

We recommend the government build more storage silos for small farmers to rent. The rental fee would help to cover the cost of constructing and maintaining the facility. Small farmers who participate in the SFP could receive the subsidy in the form of a specified percentage discounted from their rental charge. Or, the subsidy could be in the form of a grant, credited to their bank account and earmarked for storage rental.

To receive this subsidy, a co-op of small farmers would need to allocate part of their crops to the SFP and use the government facility to store those quantities. Farmers participating in the SFP could also use the storage facility for business purposes not related to the SFP (i.e. they would be able to store their remaining products after contributing a certain amount to the SFP). The storage facility provides farmers with the flexibility to manage price

fluctuations in the market and to sell at a high price. By aggregating supply among small farmers in the storage, farmers also can increase their negotiation power and increase the wholesale price.

From the government's perspective, the storage facilities would support a stable supply and price for foods required in the SFP menu. Currently, food prices fluctuate depending on customer demand and scarcity of supply. This creates extra costs for the cooks in the program to procure ingredients for the menu. For example, cooks need to buy yam in order to meet the menu requirement, but need to buy out-of-state imported yam from traders and pay a higher price, as yam is not currently in season. With storage facilities, farmers would be able to provide stable supply for the SFP and potentially reduce procurement costs for the cooks. In the long-term, this would also contribute to the food security of the state by providing additional food stocks and incentivizing farmers to plant more nutritious products in the community.

#### *5.1.2. Transportation Subsidy*

Along with the subsidy for storage, we recommend creating a subsidy for transportation to empower small farmers and integrate them into the SFP. The subsidy for transportation would work similarly to the one for storage. Co-ops of small farmers can use the transportation subsidies to bring their products to the storage facility or deliver products for the SFP. It would not be restricted to the SFP. Farmers can take advantage of the subsidy to transport goods to other markets as well. However, the subsidy would cover up to a certain agreed upon amount.

This subsidy supports small farmers to aggregate their supply and increase cost efficiency for their businesses. For small farmers, transportation associated with their production is relatively high since they still need to procure fertilizers and seeds. Delivery of their products becomes relatively expensive when transporting low quantity. This subsidy compensates for these challenges and improves the cost structure of small farmers so that they can maintain competitiveness in the market.

The support for storage and transportation provides farmers with some incentives to participate in the SFP by reducing transportation costs and increasing their flexibility to manage demand fluctuations and market prices. In addition, the farmers' participation in this way

allows the O-MEALS office to keep track of farmers directly involved in the SFP. Farmers could also use this avenue to provide feedback to improve the program.

Although more details regarding implementation should be addressed as a next step, we recommend that the Ministry of Agriculture organize this subsidy and take care of funding closely working with O-MEALS office. This subsidy provides additional opportunity for small farmers to create extra profits out of their current production, and potentially empowers small farmers to increase agricultural production in the state. Noting that farmers do pay rent for the storages, government would be able to collect expenses used for the storage constructions. Other topics regarding implementation include targeted farmer segmentation, which leads to location, size and number of storage units to build. This target farmers segments should be carefully identified considering socioeconomic distribution of farmers and community development perspectives. While commercial farmers have various sales channels, such as local markets or export to other states, the main objective of this subsidy is to provide business opportunities for small farmers through SFP. The definition of small farmers should have in mind their production volume and sale size, and the storage should be geographically accessible for those farmers and the size should be appropriate to store crops for SFP and their productions.

## **5.2. Develop Flexible Menu**

The current SFP menu targets Primary 1-3 students and is mainly determined by the nutrient requirements for this age group. The feedback collected during our fieldwork suggests that students, parents, and teachers are highly satisfied with the menu quality and quantity of food. This meets SFP's goal to influence the diet of the community and improve nutrition for school children. However, from a farmers' integration perspective, the menu should be revisited based on the following factors:

### *5.2.1. Seasonality*

The current SFP menu does not capture any seasonal changes in production. Because the menu is fixed through the year and crops are seasonal for the most part, cooks have to buy

heavily marked-up ingredients, often from local traders or market queens, when the costs of commodities rise due to product scarcity. Even if cooks pay a higher price for off-season ingredients, it does not necessarily mean that the farmers' revenue increases. Adjusting the menu to seasonal availability would benefit local small farmers and cooks because the demand from the SFP would be aligned with the farmers' production cycle. Otherwise, small farmers growing localized products cannot satisfy the demand generated by the SFP. For example, in order to comply with the menu's requirement, cooks are currently paying a markup of up to 200% for imported yams because they are off-season in Osun. A cost-effective solution would be to offer cooks a range of substitutes that are more affordable while meeting the nutritional requirements mandated by the menu.

### *5.2.2. Geographical distributions*

Geographical distributions of agricultural products should also be captured in the menu. For example, in some regions of Osun, farmers produce only local beans. In those regions, the menu could be more flexible to allow cooks to use beans produced locally. A menu that considers regionally grown produce supports local small farmers by creating a demand for their particular goods and helping them to reduce transportation cost. It also helps the SFP to reduce the costs associated with food procurement.

### *5.2.3. Farmers' economic and technical motivations*

Farmers choose the crops they grow based on economic and technical incentives. Hence, profitability and potential market growth are important factors farmers consider when determining what to produce. The decision is also dependent on how easy it is to grow certain products and the processing requirements. For example, many farmers produce maize and cassava in Osun State, but we did not find them on the SFP menu. Since farmers have strong incentives from the larger market to produce these two crops, the SFP should consider including them in the menu to align farmers' incentives to the demands of the SFP. Of course, the dietary aspects of those products need to be considered by a professional nutritionist.

Therefore, to create a more flexible and cost effective menu, we recommend O-MEALS to work with a qualified nutritionists from the Ministry of Health on a one-time effort to revise the

menu by adding alternative options for cooks. These options should balance both the nutritional requirements of the program and local production. A more flexible menu would benefit farmers by providing them with a larger demand that reflects the demand of the larger community while simultaneously benefiting cooks by providing them with more bargaining power at the market.

### **5.3. Educate Farmers / Cooks**

#### *5.3.1. Education of farmers on government resources*

Our next recommendation is for the SFP along with the government to establish new communication channels and leverage existing ones to bring awareness of program, communicate the benefits of participating in it and provide a point of contact to provide further information and support. We recommend the O-MEALS office to take on the lead developing training material and organizing training workshops specifically designed for farmers' co-ops.

O-MEALS should also leverage existing government initiatives to reach out to farmers' co-ops and educate them on the benefits of participating in the O-MEALS program. One example of such initiative is the Department of Registration at the Ministry of Commerce informational events. Every three months, a representative of the department meets with farmers in local government areas across Osun to assist them in the process of establishing and registering cooperative societies. Similarly, OREAP reaches out to local farmers in order to assess their needs for loans and guide them through the application process. Leveraging the Department of Registration or OREAP network and experience would be a cost-effective and time-efficient way for the O-MEALS program to build the foundations of this educational program.

Current commercials in media outlets should also be improved to become an effective marketing tool that increases the participation of farmers in the O-MEALS program. Feedback from the farmers indicates that, despite bringing awareness about the program, the existing commercials failed to convey efficiently the benefits of participating in it or how to get more information about it.

### *5.3.2. Education of cooks on business management and institutional support*

We recommend that the O-MEALS office update the list of topics covered in the 5-day intensive training workshop provided to the food vendors upon hiring, as well as the refresher course carried out twice a year, to include specific training on business management. Bookkeeping, budgeting, the importance of savings, revenue reinvesting and working capital generation are examples of topics that they food vendors will benefit from during their period of engagement with the O-MEALS program. Additionally, learning this skillset should be leveraged by the O-MEALS program as yet one more incentive for the food vendors to participate in the program, as it will for sure have direct and immediate impact in their side businesses.

Additionally, we suggest that this workshop cover skills such as negotiation, demand aggregation, opportunity recognition and entrepreneurship that will be useful for the cooks to thrive in this new business environment where co-ops are expected to negotiate directly with farmers. Cooks' co-ops are moving from being an organizational requirement that efficiently manages and monitors funds disbursement, to a more mature stage facing new organizational and leadership challenges where this skillset may prove crucial.

The O-MEALS office should also improve the workshop's content on the various government agencies that provide services supporting cooks' co-ops. Cooks indicated that it is currently unclear which agency to turn to when facing challenges.

#### **5.4. Connect Cooks and Farmers Through Direct Buying**

A less intrusive way to assimilate small farmer co-ops into the SFP is to facilitate direct negotiation at a co-op level between farmers and food vendors. This direct business relationship between both parties should be formalized via regular meetings held monthly or quarterly where representatives of the farmers and the vendors' co-ops evaluate the possibility of direct buying. The ultimate goal of this new business forum is to set the grounds to draft contracts between both parties for direct co-op-to-co-op purchases. At a first stage, standard contracts should be drafted under the supervision of representatives from the Ministry of Commerce. At a later stage, contract specifications such as duration, price, quantity, delivery, quality assurance steps, preconditions could be addressed.

Several benefits can derive from this type of agreement between co-ops. By establishing a private communication channel, both co-ops can gauge whether an agreement can be reached sparing both groups time consuming and costly trips to the marketplace. Coordination at the co-op level allows arranging more cost-effective distribution channels adapted to the specific needs of the co-ops. It also eliminates the negative impact of distance, as it allows co-ops that are geographically dispersed to connect.

The ultimate goal is to provide a more predictable demand for the farmers. This arrangement would significantly reduce the risk of farmers running into the undesirable scenario of bringing their crops to the marketplace and walking away at the end of the day without making a sale because another retailer offered a better price to the food vendors (price war). Food vendors also benefit, as they have a higher chance of negotiating a lower price by buying in bulk and they can do it more time efficiently with one-stop.

However, a relationship at a co-op level is possible only by engaging existing leadership on both sides. Farmer co-ops are already well organized and their chairmen and treasurers have the leadership experience required to represent the co-op at an institutional level. Vendors' co-ops on the other hand are of recent inception, responding in most instances to the need of meeting the O-MEALS requirement to participate in the SFP. Many cooks lack the business acumen that the farmers have. However, we found that a few cooks with strong organizational and leadership skills have spontaneously emerged as co-op leaders by coordinating purchases

in bulk, transportation and logistics; and even organizing one co-op union.

This recommendation would have a higher impact in rural areas than in urban settings. It facilitates coordination between farmers and food vendors, which is more challenging when the two sides are far geographically.

Four different strategies are suggested to achieve the required level of trust between co-ops to engage in direct contracts and allow for the food vendors to develop the leadership skills required for contract negotiation and handling:

1. Leadership skills should be taught in future cook training workshops and upcoming refresh courses. These currently address skills regarding hygienic food preparation and handling as well as home economics but lacks curriculum regarding organizational and negotiation skills.
2. Direct exchange could be facilitated between cooks and local farmers by designating a time and venue where both parties can meet and transactions can take place at an individual level. Face-to-face contact between parties and visual inspection of the product allows for a more flexible negotiation on price and quantity based on tangible quality and current needs of the vendors. It also helps build trust between parties and reassure the farmers on the consistency of the demand and low risk payment, which are the two main advantages of supplying their products to the O-MEALS program in exchange for favorable rates.
3. Active engagement and support of the PTA and the Planning Officer should be pursued. As active members of the community as well as institutional representatives, they can facilitate the introduction of cooks and farmers, also members of the community. They can actively bring awareness of the social and economic impact of the O-MEALS programs in the community and emphasize the common interest of both parties by helping to strengthen their business partnership. PTA and the Planning Officers can also take the role of community mediators between the two parties, contributing to building trust and facilitates dialog should discrepancies arise.
4. Active engagement of the Ministry of Commerce should be pursued. The Department of Registration is suggested to attend contract negotiation meetings as an

independent arbiter that supervises fair play. Additionally, the Department of Commerce can leverage its experience providing educational workshops to local farmers and assist the O-MEALS program in its update of the content of the training sessions offered to the food vendors upon enrolment.

### **5.5. Streamline Governance and Monitoring Systems**

In order to implement and monitor the above recommendations, clear roles and responsibilities should be defined for state and local government agencies. There are two main inefficiencies to tackle: the number of agencies that currently interact with farmers and cooks, and the communication and reporting links that travel from a local level through to the state departments and the steering committee.

First, let's consider the government interaction with cooks and farmers. Cooks are currently monitored by their Planning Officer, LIE, ZIE, O-MEALS representative, headmaster, health teacher, and members of the PTA. In addition, they must deliver their enrollment data and loan applications through the local government Planning Officer, obtain proteins from their local distribution centers, and collect money and repay loans at the bank. All of these separate stakeholders and points of contact not only slow down a cook's work, they can provide conflicting information and cause confusion. We have seen more than once through our field work that cooks do not know who to report problems to, or simply cannot determine the right person to ask for help, and so issues continually go unreported. We recommend that the number of monitors be reduced to one primary, likely the LIE, and a secondary at the school level (health teacher or headmaster). The reporting and feedback system will then become much more streamlined, because the chain of command will be clear. In addition, there will be more personal monitoring responsibility placed on the LIE because there is no duplication of their work.

The monitoring and assistance system is even more complicated for farmers. They receive support from OREAP, QIIP, OSSADEP, OSSADEM, ODEC, the Ministry of Agriculture, and likely several other agencies. Each group has a specific role, and in order to gain access to all their available options farmers must establish and maintain a relationship with each

organization. As a result, many farmers do not bother to take advantage of all the programs available, making each less effective than it otherwise would be. All of these points of contact create confusion, administrative headaches, and, in the farmers' view, very little return on their time invested. We are recommending adding to this confusion by including O-MEALS in the mix, and therefore we suggest, if possible, consolidation of these offices into a centralized farmer's assistance board that can serve as a one-stop-shop for farmers looking for support from the government. Officials could assist farmers in determining which programs they qualify for, and helping them through the application process. In addition, this office could promote the SFP as a source of demand and government support. We recognize, however, that such consolidation may not be possible, and therefore suggest an alternative education program that will teach farmers what assistance they can receive from which office and how to contact them. In either case, it is important to provide clarity to farmers about the goals for state agricultural development, including O-MEALS, and how they can fit into these plans.

Secondly, the oversight at a local and state level has unclear lines of communication, and stakeholders are unaware of their roles within the O-MEALS program. The oversight of the program is split between two state-level committees, the Monitoring Committee and the Steering Committee, who both receive different sets of reports, and we have not found a link between them. It is impossible for these groups to make informed decisions, particularly when schools and local governments collect data and loan applications from cooks, but are then slow to pass that information along. Once the data does reach the O-MEALS office, the members of the office are not aware of their responsibilities to report to their respective departments. And finally, should department leaders obtain information about the program, many are unsure what their department's roles and responsibilities are in keeping the program running. The result is that any executional problems are not escalated up the chain to the members of government that have the power to make programmatic changes, and therefore these issues remain unresolved.

To solve this problem, we recommend that the O-MEALS office take full responsibility for the program, and report all information to the Steering Committee, eliminating the need for the Monitoring Committee. O-MEALS will act as the link between local government offices and

their respective state departments through mandatory and frequent reporting schedules that will be overseen by the program manager. Each position in the O-MEALS office should be clearly outlined with specific roles and responsibilities for that representative, to ensure that all important tasks are handled and that work is not duplicated. At a higher level, the program manager should be empowered, in conjunction with the relevant ministries, to make some decisions within the program such as menu, vendor management, and farmer integration strategies. More sensitive and important decisions such as budgeting or large changes in program structure (including those laid out in this document) should be elevated to the steering committee. It is also important to clearly define the roles and responsibilities of the members of the steering committee, and each ministry within the program to further ensure that each interest is being addressed by the program structure. The steering committee, with the Program Director taking the lead, should develop long-term plans for O-MEALS that incorporate and complement existing plans for new programs and improvements from each department.

This solution will streamline the process of reporting issues in the program, and improve oversight to ensure that no important factors are overlooked. It does, however, require strong leadership from the program manager as well as the rest of the members of the O-MEALS office to continually be in contact with their field teams on the ground and the state-level oversight teams.

## 6. Next Steps

To implement these changes, there are some very specific next steps that need to be tackled. First, the Ministry of Health, in conjunction with the O-MEALS office, should hire a nutritionist to develop a flexible menu that takes into account the products that are locally produced. This recommendation is the easiest to implement and can have an immediate impact on the financial health and participation incentives for cooks.

Second, the Ministry of Education and O-MEALS should begin working together to develop educational programs that can be shared with cooks at their annual retraining. At the same time, the Ministry of Agriculture can begin working with the Ministry of Information to begin sensitizing farmers to the SFP.

Third, the Department of Agriculture, again with O-MEALS, should take over the task of incentivizing farmers to participate in the program. The recommendations outlined above should be viewed as a starting point for evaluating the best method to bring farmers into the program. The team assigned to tackle this project should look into feasibility and costs of the outlined recommendations, and propose alternatives as necessary.

Finally, our most important and complex recommendations will be passed to the UniOsun team for further analysis. They will determine the best method to implement the connection between cook and farmer co-ops, including an analysis of costs associated with the program. In addition, they will look into the structure of the reporting and governance system, and propose a structure that will allow for prompt and decisive response to any program issues. We have been working closely with this team during our field work and they are prepared to continue our work without interruption.

## **7. Appendices**

### **7.1. Appendix A – Financial Analysis**

The financial investigation performed by the Berkeley IBD Team was seen as a high-level analysis to gain an understanding of the numerous costs factored into the government-approved budget for the O-MEALS Program. Our goal was to ascertain how the overall cost structure might be impacted by increased farmer integration.

Throughout our data collection, many assumptions had to be made in order build a high-level cost model. In the end, it was challenging to determine an accurate P&L for vendors due to the numerous hidden costs—including transportation, storage and fuel—that had to be left out or estimated. In addition, pricing data provided by the state was difficult to interpret based on unknown ration (portion) sizes relative to bulk purchases of raw ingredients. We also attempted to determine the high level expenses for the program related to increased farmer integration but this too was difficult seeing as there can be numerous scenarios for integration. Analyzing the financial implications of each option would first require several comprehensive implementation strategies to be created. However, we chose to focus on our main objective (offer high-level recommendations promoting increased farmer integration) in line with what we could feasibly accomplish in the time allotted. We leave the creation of implementation plans to be carried forward by the UniOsun team.

We recommend the UniOsun students refine the financial model in order to further hone inputs related to understanding hidden costs and the implementation of various farmer integration options we recommended. A copy of the current model has been provided to the UniOsun Team.

## **7.2. Appendix B – Outstanding Issues**

Throughout the course of our field research we uncovered several other issues with the O-MEALS program that were not addressed by our scope. We want to bring them to light in this section so that the full benefits of our field research can eventually be realized.

### *7.2.1. Cook profit unrealistic expectations*

In speaking with food vendors, we have come to the realization that there is a misalignment between their profit expectations and the objectives of the O-MEALS program.

In 95% of cases, food vendors have expressed their concern about not making any profit from their involvement in the O-MEALS program and their hope that this situation will change in the near future. Food vendors are an integral part of the SFP. Without their generous support and engagement, the program could not operate. The food vendors' motivation and commitment to the program depends greatly on their trust on the program generating profits. The program confers the food vendor freedom to choose which source and at what price the menu ingredients are purchased on a daily basis within the budget per day per pupil assigned to her. The program presumes that the vendor will manage to purchase the ingredients without spending her assigned budget, making a profit out of the difference.

However, nothing has been found indicating that the budget has a built-in allowance for the food vendors that they can turn a profit if they manage to purchase the menu ingredients at the market price anticipated by the program. Additionally, numerous hidden costs affecting the food vendors regarding the purchase of menu ingredients have been identified that further reduce the profit that the food vendor could theoretically make. This potential profit reduction is even more significant for those vendors who cater schools in rural areas.

Pooling demand, buying products in bulk and negotiating lower prices with their supplies are the few strategies that the food vendors can leverage to protect their expected profits. The few cook co-ops that have managed to make substantial profits of up to N1,000 per cook per week have been able to do so leveraging factors that are unique to their specific business environment (high concentration of cooks in urban areas) and the outstanding entrepreneurial skills and expertise of some of its members. The vast majority of cooks

interviewed during our field research claims to have to use personal funds to meet the quality and quantity requirements mandated by the O-MEALS program, or claim to have to reduce the portions of the meals doled out to the pupils on account of insufficient funds.

### *7.2.2. Cooks lack of time for side businesses*

Our field research showed also that a majority of the food vendors interviewed claimed that O-MEALS program related activities take up more time than they initially expected. The amount of traveling required in order to buy non-perishable goods once a week, perishable goods every day, and to go almost daily trips to the distribution center is too time consuming and does not leave time left for them to run their own business.

Lack of leisure time to devote to their own business should make the O-MEALS office reconsider whether offering loans to set up their own shop is an effective incentive for the cooks.

### *7.2.3. Enrolment Increases*

Our field research showed a steady increase in the enrollment of pupils in primary 1 to 3 of between ten and twenty percent per week during each of three weeks that the program has been in place. Neither school Headmasters nor PTA are tracking what percentage of the new students enrolled are transferring from a private school versus student that were not enrolled in any school program before. If we truly want to assess the impact of the program on increasing school enrollment, the distinction on where new students come from should be made.

The O-MEALS program operates on a fixed budget already approved for the current fiscal year. As explained above, the system allows for updates in the amount of money disbursed to the food vendors on a bi-weekly basis. With a report from the Program Manager justifying an increase in the following two weeks budget, the Governor's Office can approve the order to First Bank of crediting the food vendors' accounts with the corresponding amount requested by the Program Manager.

Despite the reported weekly increase in enrolment, the mechanism in place to adjust the budget assigned to the cooks for food purchases has not been utilized yet. As a

consequence, the pressure on the already strained budget for food purchases and the challenges for the food vendors to stretch their budget while meeting the food quality and quantity requirements has significantly increased.

#### *7.2.4. Hidden costs*

Various transportation costs have been identified that affect food vendors and Planning Officers. Food vendors incur extra expenses traveling from their homes to the school, from their homes to the market, from their homes to the distribution centers, and in some occasions from their homes to the nearest First Bank branch. Planning Officers also need to pay for transportation, especially for those who take on the responsibility to bring chicken, beef and eggs from the distribution center to the local government office for the cooks to pick up.

The Planning Officer, LIE, ZIE, Health Teacher and Headmaster's time spend in supervisory and oversight tasks count be accounted for hidden costs too.

A comprehensive coverage of costs should also include the electricity for the fridges where the cooks store perishable ingredients, the fuel to prepare the meals and the cleaning supplies for the cooking utensils, pots and plates used to serve the food.

#### *7.2.5. Kindergarten participation in program*

In many schools, we saw Kindergarten (KG) students expecting food during lunchtime and crying when they were not served. Teachers and parents desire SFP to expand to cover KG students in addition to the primary 1-3 students. Providing nutritious lunches for KG and potentially for primary 4-6 should be a future goal for the SFP.

#### *7.2.6. Cooking location (vendor's home vs. school kitchen)*

Many of teachers and parents showed concern about the cooking environment. In the previous program, lunch was prepared in the school kitchen. This allowed for better oversight. In the current program the community is unaware of the preparation environment since the cooking location is in each cook's home. Due to concerns about this, many teachers and parents mentioned that they prefer vendors to cook at school. However, this issue requires further

consideration as it pertains to costs associated with repairing kitchens and water availability at each school.



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