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The U.S. Government's Global Hunger & Food Security Initiative

FINAL PERFORMANCE EVALUATION REPORT MAXIMIZING AGRICULTURAL REVENUE AND KEY ENTERPRISES IN TARGETED SITES (MARKETS II) ACTIVITY IN NIGERIA

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FINAL PERFORMANCE EVALUATION REPORT MAXIMIZING AGRICULTURAL REVENUE AND KEY ENTERPRISES IN TARGETED SITES (MARKETS II) ACTIVITY IN NIGERIA

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ABSTRACT

Maximizing Agricultural Revenue and Key Enterprises in Targeted Sites (MARKETS II) is a five-year Feed the Future activity aimed at sustainably improving food security, nutrition, and incomes for smallholder farmers in rural Nigeria. MARKETS II provides technical support to five value chains, cocoa, cassava, rice, sorghum, and aquaculture, and to two sub-value chains, soybean and maize. MARKETS II achieves these goals through supporting farmers' access to credit, capacity building, and household economic strengthening activities. This evaluation of MARKETS II was undertaken to examine progress and accomplishments as well as to identify performance issues, constraints, and lessons learned to help guide future similar Feed the Future activities in Nigeria. The evaluation focused on four areas: 1) Women and Youth; 2) Public-Private Partnerships; 3) Sustainability; and 4) Relevance. To answer evaluation questions, a mixed methods approach and field visits to four states (Benue, Kaduna, Kano, and Ondo) and the Federal Capital Territory were used to collect data. These states were selected because target value chains and sub-value chains exist in them, and they represent Nigeria's three agricultural geographical regions. The evaluation found that the MARKETS II strategy was very successful for reaching women farmers but was less successful in reaching youth and establishing public-private partnerships. MARKETS II has also contributed to increased productivity and opportunities to increase household incomes across all value chains. A growing number of other smallholder farmers have started adopting the new technologies and practices, indicating that this part of the activity will be sustainable beyond MARKETS II.

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ACRONYMS

ADP	Agricultural Development Project
AFFAAN	All Fish Farmers and Aquaculture Association of Nigeria
BFS	Bureau for Food Security
BNADP	Benue State Agricultural Development Authority
BoA	Bank of Agriculture
CARI	Competitive African Rice Initiative
CBO	Community-Based Organization
Chemonics	Chemonics International
DDI	Diamond Development Initiatives
EQ	Evaluation Question
EA	Extension Agent
Egalf	Egalf Nigeria Ltd.
ET	Evaluation Team
FCT	Federal Capital Territory
Feedtek	Feedtek Limited
FGD	Focus Group Discussion
FMARD	Federal Ministry of Agriculture and Rural Development
Fortis MFB	Fortis Microfinance Bank Plc.
GAP	Good Agricultural Practices
GI	Group Interview
GoN	Government of Nigeria
Greenspore	Greenspore Agriculture Limited
HA	Hectare
Hule and Sons	Hule and Sons Ltd.
IFAD	International Fund for Agricultural Development
IDP	Internally Displaced Person
IFDC	International Fertilizer Development Corporation
IITA	International Institute of Tropical Agriculture
IP	Implementing Partner
IR	Intermediate Result
JICA	Japan International Cooperation Agency
KADP	Kaduna State Agricultural Development Authority
Kg	Kilogram
KII	Key Informant Interview
KNARDA	Kano State Agricultural and Rural Development Authority
LAPO MFB	LAPO Microfinance Bank Ltd.
LGA	Local Government Area
LOE	Level of Effort
m	Meter
M&E	Monitoring and Evaluation
MARKETS	Maximizing Agricultural Revenue in Key Target Sites
Matna Foods	Matna Foods Ltd.
MEF	Microenterprise Fundamentals
MFB	Microfinance Bank
MFI	Micro-Finance Institution
Mikap	Mikap Nigeria Ltd.
MT	Metric Ton
Multi-Trex	Multi-Trex Integrated Foods Plc.
NGO	Non-Governmental Organization
NIRSAL	Nigeria Incentive-Based Risk Sharing System
ODSADP	Ondo State Agricultural Development Authority

PIND	Foundation for Partnership Initiatives in the Niger Delta
PIR	Project Intermediate Result
PoPs	Package of Practices
PPP	Public-Private Partnership
SO	Strategic Objective
SOW	Scope of Work
ToT	Trainers of Trainers
Umza	Umza International Farms, Ltd.
USAID	United States Agency for International Development
USD	United States Dollars
USG	United States Government
VCIP	Value Chain Innovation Platform
WEAI	Women's Empowerment in Agriculture Index

EXECUTIVE SUMMARY

EVALUATION PURPOSE

The purpose of the final performance evaluation of Maximizing Agricultural Revenue and Key Enterprises in Targeted Sites (MARKETS II) in Nigeria is to provide an independent examination of activity progress and accomplishments; identify achievements, performance issues, and constraints related to activity implementation and effectiveness; and identify lessons learned and recommendations to determine which component(s) of MARKETS II to scale up, modify, or re-design in the future in order to increase impact on Feed the Future investments in Nigerian agriculture. The intended audience for this evaluation is USAID/Nigeria, the USAID Bureau for Food Security (BFS), implementing partners (IPs), universities, and relevant Federal and State government ministries of Nigeria. Stakeholders will share and use the findings and recommendations generated from this evaluation to improve future similar Feed the Future activities and agricultural programs in Nigeria.

ACTIVITY BACKGROUND

MARKETS II is a five-year agriculture value chain activity designed to alleviate poverty and improve food security through technical support provided to selected value and sub-value chains (aquaculture, cassava, cocoa, maize, soybean, sorghum, and rice, both irrigated and rain-fed rice), credit, capacity building, household strengthening, and activities “focusing on improving rural livelihoods through the expansion of economic opportunities in the agricultural sector, especially for women and youth, and increasing the competence of local partners.” The activity focused on key implementation areas, including productivity improvement, value-added processing, technology adoption, and commercialized agriculture, as key areas aimed to increase sales and jobs for agriculture-related businesses. Chemonics implemented MARKETS II in 13 target states and in the Federal Capital Territory (FCT). Sub-contractors and sub-awardees included: The International Fertilizer Development Center (IFDC), Winrock International, Making Cents International, Diamond Development Initiatives (DDI), and Enclude.

EVALUATION DESIGN, METHODS, AND LIMITATIONS

The evaluation focused on four topic areas: 1) Women and Youth; 2) Public-Private Partnerships (PPPs); 3) Sustainability; and 4) Relevance. To answer the evaluation questions (EQs), the Evaluation Team (ET) employed a mixed methods approach, including qualitative and quantitative data analyses. The ET interviewed and surveyed beneficiary and non-beneficiary farmers in four states (Benue, Kaduna, Kano, and Ondo) and FCT. These were selected because they represent Nigeria’s three geographical regions and include areas where all seven of the target value and sub-value chains exist. Specific data collection methods included document review, key informant interviews (KIIs), focus groups discussions (FGDs), and group interviews (GIs). Beneficiaries interviewed were randomly selected and then asked to identify non-beneficiary farmers (“snowball” approach) for further interviews by the ET.

Evaluation limitations included: 1) timing of fieldwork was scheduled during the main farming season when farmers were occupied with field agricultural tasks; 2) logistics limitations due to poor roads and/or conflict in Ondo and Benue States; and 3) time and resource limitations, which restricted the total number of beneficiary farmer groups, resulting in a sample size of less than 5 percent of the total of 6,613 farmer groups. The sample included very limited numbers of women and youth. The limited sample size presents challenges in applying findings to the total population of beneficiary farmer groups, especially as related to women and youth.

MAIN FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Evaluation findings, conclusions, and recommendations are summarized on the following page.

Findings	Conclusions
EQ 1: Women and Youth	
1.1 To what extent did MARKETS II address the problems of women's and/or youth participation in its programmed economic activities?	
- MARKETS II addressed problems related to women's participation in its activities by supporting farmer association membership for women. This was done by adapting participation requirements, especially access to land and other resources, including agricultural business opportunities. - When the activity began, young men indicated that they were less interested in MARKETS II activities partly because they perceived farming as a low status vocation with limited income. - With time, young people in all target value chains who were exposed to MARKETS II had improved perceptions about farming and agricultural business.	- By focusing on women's access to resources, including land and farmer association participation, and through targeted technical assistance, MARKETS II significantly addressed the problems of women's participation in its programmed economic activities. - By demonstrating the profitability of farming to youth, MARKETS II significantly addressed a key constraint to youth participation in programmed agricultural activities due to their negative opinions of farming. - Demonstrations of productivity and profitability within their peer groups became a primary factor in attracting youth to the program.
Recommendations: - Future agricultural activities targeting women in Nigeria should build on MARKETS II's success in specifically addressing women's access constraints to resources and agricultural business opportunities. This can be done by tailoring requirements for participation to women's prevailing resource levels, including land sizes, time, and association membership and by providing discreet technical assistance to women. - Future activities targeting youth in Nigeria should start by sharing success stories to help convince and motivate them to engage in agricultural sector value chains as viable option for improving income.	
1.2 Which approaches have been most effective in reaching women and/or youth?	
- The MARKETS II strategy to reach women and youth through farmer associations was successful, as the activity exceeded its target of reaching 50 percent women (by reaching 62 percent) and achieving its target of 30 percent of youth of all farmers reached. - Some women and youth farmers indicated that they became aware of MARKETS II in 2016 (four years into the activity) by observing activities and improved production of the association members in their communities. - Sorghum value chain had the largest share of women at 41 percent, then rice (40 percent), and cocoa and cassava (32 percent). The sub-value chain with the most women was soybean (35 percent) and then maize (30 percent). - Women stated that extension agents (EAs) focused on addressing women's unique needs and resource constraints that were essential to improvements in their livelihoods. - In comparison to recruitment process for women, there was far lower incidence of EAs facilitating association membership to engage youth farmers.	- The MARKETS II strategy to reach women and youth through farmer associations was successful as it helped exceed its target of reaching 50 percent women and meet its target of reaching 30 percent of youth. - Both women and young people valued increased and more effective assistance from EAs in improving their productivity and profitability. - It took some time for the program's activities to attract other participants, but later in the program this became a success story by engaging more women and young people who observed farmer association activities. - The program was successful in engaging women in target value and sub-value chains where they were already working, such as sorghum, but also increased women's participation in cocoa and maize production.
Recommendations: - The MARKETS II's strategy for reaching women through farmer association activities should be taken forward as it enabled the project to meet or surpass its targets. - Future interventions should raise awareness about the program by targeting beneficiary networks, popular value chains, and their different chain points to ensure all potential participant communities are reached. - Involving local women's and youth groups at the activity formulation and design stage could aid in recruiting more women and young people for similar interventions in the future. - Young people who have successfully adopted MARKETS II technologies should be the face of subsequent interventions on social media and during community open days.	

Findings	Conclusions
Promoting activity components and initiatives should be an essential action at the beginning of implementation.	
1.3 How have women and/or youth benefitted from MARKETS II implementation?	
- The consensus among all women farmers that participated in KIIs and FGDs was that activity trainings were immensely valuable for learning new farming practices, and that adopting these new practices, such as planting, spacing, fertilizer application methods, timing of fertilizer applications, harvesting practices, etc., led to increased yields. - Many women and young people who participated in MARKETS II activities noted the innovative techniques that they learned led to increased crop yields and household income. - In some instances, the activity contributed to providing incentives for women and young farmers to diversify from traditional crops like sorghum, rice, and soybean by also cultivating crops like cocoa and engaging in beekeeping and honey production. - Increases were highest for women farmers in the maize sub-value chain and lowest for women rain-fed rice farmers, but the scale of increases ranged from 60 percent and 145 percent. - Young men who had been trained and adopted new agricultural practices became informal EAs in some states. - MARKETS II beneficiaries described farmer production training Package of Practices (PoPs), including training on recordkeeping, measuring farm size, and determining costs, revenues, and income, as crucial information on yields and incomes that facilitated investment decisions.	- MARKETS II has actively benefitted both women and young farmers over the life of the activity. - Interventions supporting women and young farmers concentrated on introducing novel agricultural practices and techniques for improving productivity. - A significant number of beneficiaries were particularly happy with how their livelihoods improved after involvement with MARKETS II. - Training on critical information regarding measurement of yields and incomes provided in the MARKETS II PoPs training material was useful for facilitating farmer investment decisions. - As envisioned by MARKETS II's revised implementation strategy, increased income and productivity clearly led to a more inclusive environment for women and young people.
Recommendations: - Training should include methods to strengthen farmer associations and women's individual ability to increase yields and incomes and properly measure their acreage. - To further empower women, affordable and accessible tools to enable them to keep track of yields and incomes should be introduced—providing them with a way to standardize their produce. Recording books for each year should also be provided to each woman to record her yield. - Provision of training on critical information regarding measurement of yields and incomes should be emphasized in future programs to facilitate farmer decisions on investments they will make. - Young people, both women and men, should be encouraged to establish associations in all target states. - Efforts should be made in future activities to ensure data is disaggregated by sex and age to provide a clear picture of how the activity has impacted young people and how they have benefitted.	
1.4 Were there any missed opportunities for incorporating women and/or youth into MARKETS II activities?	
- There was universal agreement among women that participated in all FGDs that more women could have been reached had participation in the activity not been restricted to farmer association members only. - MARKETS II also missed opportunities to reach more women along the various points of the value chain such as processing. For example, more women participate in processing cassava than those who farm cassava.	- MARKETS II missed some opportunities for expanding participation of women and young people in their activities, such as reaching young people and women at the processing points of the value chain and following through on referrals from associations of interested non-members. - MARKETS II did not necessarily differentiate locals from migrants in soliciting participants.

Findings	Conclusions
MARKETS II missed the opportunity to reach young people at the processing points of the value chains such as in rice processing and as cocoa sprayers in the cocoa value chain. Some participants in MARKETS II activities were not locals but rather migrant workers from other states.	
Recommendations: - Careful consideration should be given to determining the activities most likely to be appealing to younger women to ensure an effective use of activity resources to reach targeted beneficiaries in a timely manner. - A dedicated Women and Youth position similar to the national level specialists should be designated and employed by service providers in each state for future interventions. - More program activities should be included along the various points of the value chains where more young people or women are engaged, or where quick returns could encourage their participation. - Future interventions targeting young people must ensure that a higher portion of participants are locals, so the knowledge and skills acquired do not get lost when migrant laborers return to their homes.	
1.5 Are there any successes from MARKETS II that can be adapted to specifically integrate women and/or youth?	
- Women farmers, EAs, and service providers identified capacity building to introduce new technologies and good practices as a major strength of the program's activities. - New techniques and practices were responsible for increased productivity for women farmers. - Eliminating the middleman through direct linkages to off-takers encouraged women to increase farm size and production. - MARKETS II's requirement of equal representation of women and men farmers as beneficiaries ensured that all partners deliberately identified women farmers to be a part of the network. - Young farmers found that capacity building and the introduction of new agronomic practices and skills were instrumental in increasing their yields and income.	- Reaching women and young people through associations and including women EAs, matching capacity building with the farming calendars, and working with both women's and mixed associations, were successful. - Working with EAs through the associations ensured that groups of farmers were reached as opposed to only individuals, which helped build social capital within the groups. - MARKETS II's capacity building, which introduced new technologies and good agricultural practices, yielded speedy results for women and young farmers and was key to their increased production yields and incomes.
Recommendations: - Future activities should adapt a focus-specific women and youth integration plan with a simplified step-by-step version of how to implement the guide for service providers and EAs. - Future interventions should also target women with broader training that would, in addition to teaching new agronomic practices, provide technical assistance such as knowledge exchange tours to other corporate farms and marketing skills. - Capacity building training in new agronomic practices, which were at the core of successes recorded by young farmers, should be integrated in future activities.	
EQ 2: Public-Private Partnerships	
2.1 What results of MARKETS II can be attributed to its PPP model?	
- There were 146 entities engaged in PPPs because of MARKETS II surpassing the target of 136 by 7 percent. Because of PPPs, companies purchased produce from MARKETS II farmers, in effect generating a market linkage. - PPPs increased awareness of best technologies and good practices among farmers groups, which contributed to an increased volume of supplies delivered by the linked farmers' groups. - MARKETS II training for banks on financing agricultural activities (i.e., risk management, business opportunities, and customer service) was	- Respective states' government agencies, ADPs, in partnership with their respective private sector organizations, were able to perform their roles effectively during MARKETS II. - The training of ADPs reduced the costs and time that EAs spent in performing their duties. - The allowances and logistical support MARKETS II gave EAs provided them with the necessary incentives to deliver on their mandate during activity implementation.

Findings	Conclusions
unsuccessful in convincing them to lend to smallholders. • Private sector partners successfully facilitated capacity building services to farmers' organizations to educate them on best practices and create linkages between farmers' groups and off-takers. • State Agricultural Development Projects (ADP) played an essential role in the provision of capacity building services and linkages with the private sector. The sustainability of the ADPs is questionable, however, largely because of the ongoing lack of central funding that allows them to operate effectively. • The number of public EAs is insufficient to reach farmers.	
Recommendations: • Future interventions should deal directly with the private sector partners, whereas the activities implemented by the ADPs could be funded by the private sector. Alternatively, the private sector may develop their extension system and provide the necessary extension delivery services to farmers. • The nature of roles of the partners under the PPPs should be defined at the activity design and formulation stage. The potential PPP key partners should be involved in discussions that include relevant financial institutions and a country's central bank so that their roles (policies and strategies) related to commercial bank lending and micro-finance institutions (MFIs) are clearer. • Government departments and ministries that oversee rural agricultural development should also contribute to any activity formulation exercises. • Future interventions considering PPPs should support farmers with provision of inputs since banks are cautious of lending to smallholder farmers. • A specific option to consider is creating Value Chain Innovation Platforms (VCIPs) with a mandate to facilitate interaction between actors in the value chain.	
2.2 What is the value-added of partnering rather than merely sub-contracting/grants?	
• Partnering has fostered an increased demand for extension service, improved seeds, and advisory services on good agricultural practices. • Partnering has enhanced farmers' capacity to produce quality soybeans and built the capacity of the farmers to see farming as a business rather than just livelihood. • MARKETS II partnering has created greater market opportunities.	• The respective private sector partners have all attested to the positive contribution or value-added of partnering, which has enhanced the quality and quantity farmers' supply and processed products. • Partnering has helped expand market opportunities for both farmers and other partners. Finally, partnering tends to promote sustainability.
Recommendations: • Partnerships should be continued and sustained in future projects. • Dealing directly with the private sector will promote efficiency and enhance sustainability of activities.	
EQ 3: Sustainability	
3.1 Did the MARKETS II approach create any factors that (can) enshrine sustainable effects?	
• Lead farmers have evolved into community-based facilitators, facilitating local buy-in—a vital aspect of sustainability • MARKETS II's new technology and good practices capacity-building initiatives, delivered to the service providers, who subsequently supervise public-sector extension services, provided a cascade effect for farmers receiving those extension services.	• Lead farmers employ a participatory approach with other farmers to get their buy-in and own the process. • Capacity building and training activities are likely to have the most lasting impact when local people are taught to teach others. • The introduction of new skills and technologies, especially with respect to younger farmers, is likely to have lasting effect.
Recommendations: • USAID future programming should ensure that the lead farmers and farmers' associations can function as trainers of trainers (ToT), as they will be the ones to replicate the technology transfer over time.	
3.2 How did the organizational capacity-building work affect the sustainability of the partner	

Findings	Conclusions
organizations in PPPs?	
- Business trainings, recordkeeping, linkages with inputs suppliers and financial institutions, and, to some extent, with off-takers, were not as strong as other training. - Private sector partners acknowledged the contribution of capacity building work delivered under the PPP arrangement as enhancing their delivery of trainings to lead farmers and other farmers. - The problem of aging and the limited number of EAs pose a threat to sustainability of extension delivery under the PPP.	- Capacity building activities conducted by public partner organizations in PPP during MARKETS II implementation were largely influenced by the allowances and logistical support. - These provided good incentives and motivated the EAs to deliver step-down trainings with positive impact on crop yields, but evidence suggests that it is unlikely that extension delivery and capacity building of activities to farmers' group by the public entity will continue post-MARKETS II. - This lack of sustainability is due to the weak capacity of the public extension delivery system.
Recommendations: - The PPP approach should aim to strengthen public sector engagement, whereby the private sector can fund the activities of the public sector to deliver quality extension services. - There should be high-level advocacy to both state and federal governments to increase funding to the ADPs, and to recruit and train young people who will deliver extension services.	
3.3 To what extent are lasting results reaching the intended beneficiaries?	
- Farmers and the off-takers (processors) who buy harvested crops from farmers established linkages, which created market opportunities for the farmers. - Findings from interviews with farmers in all seven value chains indicated that productivity after MARKETS II's interventions increased. However, in 20 out of the 33 farmers' groups, participants mentioned that there is still a problem with consistent supply of improved seeds, chemicals, and fertilizers. - The activity has enhanced farmers' access to improved production technologies, practices, and trainings. Changes in outputs at farm level created job opportunities for off-takers to employ more workers.	- Adoption of new technologies and practices was influenced by the simplicity of the technologies and practices, affordability, and accessibility to smallholders. These attributes of technologies and practices tend to support the potential for long-term sustainability. - Once farmers had a good grasp of the information given to them through trainings and practices, they kept that information and continued to use it. This is the sustainable effect of knowledge transfer. - Many of the linked MARKETS II farmers now see farming not only as a form of livelihood but also as a business. - In the case of agricultural inputs like seeds, chemicals, and equipment, accessibility was a problem.
Recommendations: - In similar agriculture-related activities, access to new technologies is vital, especially access to seeds, which are crucial to sustainability. Community seed production schemes should be incorporated as a specific activity output and should strengthen farmers' capacity in techniques for good quality seed production. - ADPs should be encouraged to work with selected farmers and non-governmental organizations (NGOs) to develop on-farm community-level seed production schemes, which will ensure a constant supply of good quality seeds.	
3.4 What evidence indicates that non-beneficiary farmers have adopted technologies and practices promoted by MARKETS II?	
- In the cocoa value chain, eight non-beneficiary cocoa farmers in Ifedayo-Ala in Akure North local government area (LGA) of Ondo State adopted good agronomic practices, especially pruning, spacing of 3-meter (m) x 3m planting of cocoa seedlings, rehabilitation of old cocoa trees, and application of fertilizer to cocoa seedlings. - Similarly, in the sorghum value chain in Kano State, two young, non-beneficiary farmers, adopted good practices as a result of exposure to MARKETS II.	- Non-beneficiary group farmers have adopted some of the new technologies and practices promoted by MARKETS II. - Non-beneficiaries are primarily encouraged to adopt new technologies and practices to improve their own operations and crop yield outputs by observing others using the new practices. MARKETS II-supported farmers introduced the new agricultural practices and methods of production and processing into their communities.

Findings	Conclusions
• The ET held 2 FGDs with 22 non-beneficiary farmers who often sourced improved seeds through exchange of grains with beneficiaries. • Findings from field visits showed that around 75 percent of the non-beneficiary adopters of the new technologies and good agricultural practices promoted by MARKETS II were young people.	
Recommendations • The promotion of new technologies and good practices should be scaled-up in future programs to reach more farmers in target communities. • This will increase adoption of the whole range of technologies and practices promoted by MARKETS II. It will also increase the likelihood of long-term sustainability in rural communities.	
EQ 4: Relevance	
4.1 To what extent was MARKETS II relevant to the problem it aimed to address?	
• MARKETS II has partially contributed to a solution for weak agriculture business culture, and limited markets. • MARKETS II made the most contribution in improving productivity in all value chains.	• There appears little doubt that without MARKETS II's interventions to support its targeted beneficiaries, the livelihoods of smallholder farmers in the selected areas of support would not have progressed or developed to the same extent—if at all. • MARKETS II was less successful in addressing the problems associated with business culture and with the expansion of markets.
Recommendations: • In particular, and with a focus on sustainability, new activities should concern themselves with these issues: 1) Is there a continuation of activity goods and services delivery once the activity ends? 2) Have changes been stimulated or caused during or after the activity? And 3) Are there new initiatives that stemmed from the activity, either during implementation or after? Addressing these issues at the design stage increases the probability that the intended results will continue post-activity. • Future interventions about capacity building should pay greater attention to improvements in business performance.	

I.0 EVALUATION PURPOSE AND QUESTIONS

I.1 EVALUATION PURPOSE

This is the final performance evaluation of the Maximizing Agricultural Revenue and Key Enterprises in Targeted Sites (MARKETS II) activity funded by the United States Agency for International Development (USAID) Mission in Nigeria. Chemonics International (Chemonics) implemented this activity in partnership with its sub-contractors and sub-awardees between April 18, 2012 and August 31, 2017. The total project value was \$64,932,078.078. MARKETS II was a follow-on activity to the MARKETS activity, which was also implemented by Chemonics between June 23, 2005 and December 26, 2010.¹

The purpose of this evaluation was to provide an independent examination of the overall progress and accomplishments of the MARKETS II activity in Nigeria; and identify achievements, performance issues, and constraints related to activity implementation and effectiveness. The evaluation also identified results and lessons learned from implementation and provides concise, actionable recommendations to determine which component(s) of MARKETS II to scale up, modify, or re-design in future procurements to increase impact on Feed the Future and investments in Nigerian agriculture. The intended audience for this evaluation is USAID/Nigeria, the USAID Bureau for Food Security (BFS), implementing partners (IPs), universities, and relevant Federal and State government ministries of Nigeria.

The findings and recommendations generated from this evaluation will be shared, discussed, and used by the stakeholders to improve future similar Feed the Future activities and agricultural programs in Nigeria (see Annex A: Expression of Interest).

The evaluation was conducted between April and September 2017 by a team assembled by the Program Evaluation for Effectiveness and Learning (PEEL) project, implemented by ME&A. The evaluation team (ET) included Dr. Paul Amaza (Team Leader), Ms. Ngukwase Surma (Social Scientist/Specialist), and Ms. Olayinka Martins (Evaluation Specialist). To support the ET, Ms. Yemisi Micah, an Evaluation Specialist, was contracted to analyze qualitative data using NVivo (see Annex B: Evaluation Team).

I.2 EVALUATION QUESTIONS

The evaluation focused on four topic areas: 1) Women and Youth;² 2) Public-Private Partnerships (PPPs); 3) Sustainability; and 4) Relevance. The complete evaluation questions (EQs) are:

1. Women and Youth:
 - 1.1 To what extent did MARKETS II address the problems of women's and/or youth participation in its programmed economic activities?
 - 1.2 Which approaches were most effective in reaching women and/or youth?
 - 1.3 How have women and/or youth benefited from MARKETS II implementation?
 - 1.4 Were there any missed opportunities for incorporating women and/or youth into MARKETS II activities?
 - 1.5 Are there any successes from MARKETS II that can be adapted to specifically integrate women and/or youth?
2. Public-Private Partnerships:
 - 2.1 What results of MARKETS II contributed to its PPP model (differentiated by size—such as small sub-contractors, large sub-contractors, or government alliances)?

¹ "MARKETS II Quarterly Progress Report October-December 2016," Chemonics for USAID, January 30, 2017.

² The GoN officially defines youth as "all young males and females aged 18 – 29 years, who are citizens of the Federal Republic of Nigeria." However, USAID defines youth as individuals aged 18-29 cited in "MARKETS II Year 2 Work Plan October 1st 2013 to September 30th, 2014," Chemonics for USAID, January 30, 2013.

- 2.2 What is the advantage of partnering rather than merely sub-contracting/making grants?
3. Sustainability:
 - 3.1 Did the MARKETS II approach/programming create any factors that (can) enshrine sustainable effects?
 - 3.2 How did the organizational capacity-building work affect the sustainability of the partner organizations in PPPs?
 - 3.3 To what extent are enduring results reaching the intended beneficiaries?
 - 3.4 What evidence indicates that non-beneficiary farmers have adopted technologies and practices promoted by MARKETS II?
4. Relevance:
 - 4.1 To what extent is MARKETS II relevant to the problem it aimed to address?

2.0 ACTIVITY BACKGROUND

2.1 OVERVIEW

MARKETS II is a five-year agriculture value chain activity designed to alleviate poverty and improve food security. The activity provides technical support to selected value and sub-value chains,³ credit, capacity building, household strengthening, and women and youth integration activities “*focusing on improving rural livelihoods through the expansion of economic opportunities in the agricultural sector, especially for women and youth, and increasing the competence of local partners.*”⁴ Emphasizing “*farming as a business,*” MARKETS II was designed with a demand-driven, private sector-led, value chain approach to expand smallholder farmers’ production and link them to markets—including agro-processors. Smallholders are defined as farmers cultivating small plots ranging from one to five hectares (HA).⁵ The activity addressed key implementation areas, including productivity improvement, value-added processing, technology adoption, and commercialized agriculture, all of which aim to increase sales and jobs for agriculture-related businesses. Chemonics implemented MARKETS II in 13 target states and in the Federal Capital Territory (FCT) (note that Sokoto is cited twice in project monitoring data).⁶

Sub-contractors and sub-awardees included: The International Fertilizer Development Center (IFDC); Winrock International; Making Cents International; Diamond Development Initiatives (DDI); and Enclude. The role of these sub-contractors and sub-awardees was as follows:

- **IFDC:** Improve farmer access to quality agro-inputs and adoption of more beneficial farm practices designed to increase productivity and return nutrients to depleted soils. IFDC also works in partnership with other state and federal governments;
- **Making Cents International:** Develop culturally appropriate agricultural and small agribusiness training curricula to better reach semi-literate populations;
- **Winrock International:** Provide technical expertise for the development and rehabilitation of water and irrigation systems and promote sustainable water and soil management;
- **DDI:** Handle out-grower schemes for white and yellow sorghum, rice, and sesame value chains⁷ under project supervision; and
- **Enclude:** Provide technical assistance to commercial banks to expand the existing range of agricultural financial products.

Major counterpart organizations included the Federal Ministry of Agriculture and Rural Development

³ Aquaculture, cassava, cocoa, maize, soybean, sorghum, and rice, both irrigated and rain-fed rice.

⁴ “MARKETS II Quarterly Progress Report October – December 2012,” Chemonics for USAID, January 30, 2013.

⁵ Ibid.

⁶ Anambra, Benue, Ebonyi, Jigawa, Kaduna, Kano, Kebbi, Kwara, Lagos, Niger, Oyo, and Sokoto, in addition to the FCT.

⁷ As noted above the sesame value chain activities were dropped after the first year.

(FMARD), State Agriculture Development Programs (ADPs), the Foundation for Partnership Initiatives in the Niger Delta (PIND), the International Fund for Agricultural Development (IFAD), the FADAMA and Competitive African Rice Initiative (CARI) projects, and the Japan International Cooperation Agency (JICA).⁸

2.2 RESULTS FRAMEWORK

As the flagship project of USAID Nigeria's Feed the Future Program, MARKETS II supports USAID/Nigeria Strategic Objective (SO) 12: *"Increased rural incomes in assisted areas."* The overall objective of the activity is *"increased smallholder income from agricultural development promoted through enhanced private sector participation and investment."* The full MARKETS II activity Results Framework, as revised in November 2014, is presented in Annex B.

In addition to the U.S. Government's (USG) Feed the Future Initiative, MARKETS II also supports the Government of Nigeria's (GoN) Agricultural Transformation Agenda, which addresses critical issues hindering the agricultural sector. In designing MARKETS II activity, USAID/Nigeria identified low productivity, a weak business culture, and lack of market opportunities as the top three constraints to revitalizing the agricultural sector.⁹ As such, a key national partner was FMARD, which is responsible for agricultural development and transformation.

3.0 EVALUATION METHODS AND LIMITATIONS

3.1 EVALUATION METHODOLOGY

The ET employed a mixed methods approach, including qualitative and quantitative data analyses, to implement this evaluation. Data was collected from documentary data sources, as well as from two major stakeholder groups:

- **IPs**, which included Chemonics, subcontractors and sub-awardees, and counterpart organization staff; and
- **Farmer groups**, which included both beneficiary and non-beneficiary farmers. Beneficiaries were farmers that were specifically targeted and reached by the MARKETS II project. Non-beneficiaries were farmers not involved with the activity, but who used or applied new technologies and good agricultural practices promoted by the activity.

The ET randomly selected beneficiaries from a list of farmers groups provided by Chemonics staff. Non-beneficiary farmers were selected through a snowball sampling method based on information provided by beneficiary farmers in their respective communities. The ET interviewed and surveyed beneficiaries and non-beneficiary farmers in four selected states (Benue, Kaduna, Kano, and Ondo) and the FCT. These four states were selected because each included all seven of the selected value chain crops targeted by the MARKETS II activity. They also encompassed Nigeria's three geographical regions—northern, central, and southern. MARKETS II discontinued work with sesame farmers after the first year, so this commodity was not included in this evaluation.

3.1.1 Document Review

Prior to fieldwork, the ET conducted a review of the activity-related documents, including: Baseline Survey; Value Chain Analyses; Annual Work Plans; Quarterly and Annual Reports and Performance Monitoring Plans; Cost Benefit Analyses; and Women, Youth, and Vulnerable People Integration Plans. Document review provided the ET with in-depth knowledge of MARKETS II activities.

3.1.2 Key Informant Interviews

⁸ "MARKETS II Quarterly Progress Report October-December 2016," Chemonics for USAID, January 30, 2017.

⁹ Ibid.

The ET conducted key informant interviews (KIIs) with 43 individuals representing the various stakeholder groups involved in the activity, including six MARKETS II staff. Individuals selected for KIIs also included 5 MARKETS II service providers,¹⁰ 2 staff at FMARD, 12 staff at ADPs in the FCT and the 4 selected states, 11 processors (off-takers) who buy grain from farmers, 2 staff at microfinance banks (MFBs) and Bank of Agriculture (BoA), a staff member at the Nigeria Incentive-Based Risk Sharing System (NIRSAL), 2 input suppliers, and 1 staff each at IFDC and the International Institute of Tropical Agriculture (IITA). Staff comprised 20 representatives from PPPs, including 7 at public institutions and 13 at private institutions. Table 1 below summarizes the stakeholder KIIs, focus group discussions (FGDs), and group interviews (GIs) by stakeholder group. The ET purposively selected these individuals from a list of partners and collaborators provided by the MARKETS II staff to include stakeholders in the respective value chains in the selected target states. In some instances, in-person KIIs were not possible due to lack of availability. In these cases, data was collected via email.

Table 1: Stakeholder KIIs, FGDs, and GIs by Stakeholder Group

Type	Interviewee(s)	FCT	Benue	Kaduna	Kano	Ondo	TOTAL
KIIs	MARKETS II Staff	6					6
	MARKETS II Service Providers/a		1	1	1	2	5
	FMARD Staff	2					2
	ADP Staff		2	3	5	2	12
	Processors (“off-takers”)		2	1	1	7	11
	MFBs/BoA		1			1	2
	NIRSAL	1					1
	Inputs Suppliers			1	1		2
	IFDC Staff	1					1
	IITA Staff	1					1
	Sub-total	11	6	6	8	12	43
FGDs	Beneficiaries						
	Youth				1		1
	Women		2	5	0	2	9
	Mixed		2	2	2	2	8
	Sub-total		4	7	3	4	18
	Non-beneficiaries		15	24	2	8	49
GIs	Beneficiaries						
	Youth			1		2	3
	Women		1	1	2/b	1	5
	Mixed		4	1		2	7
	Sub-total		5	3	2	5	15
	Total		15	16	13	21	76

Source: “MARKETS II Final Evaluation Field Data Collection Work Plan,” ME&A for USAID, June 20, 2017.

a. Includes EAs, as defined in footnotes.

b. The two farmer groups in Kano State are young women’s groups.

3.1.3 Focus Group Discussions and Group Interviews

To understand beneficiary perceptions of activity achievements, challenges, and results, and to

¹⁰ MARKETS II “Service Providers” were private organizations that worked with the Extension Agents to deliver services to farmers.

identify lessons learned, the ET conducted FGDs and GIs with 486 farmers across all 7 value chains in the 4 selected states. FGDs included both beneficiary farmer groups and non-beneficiary farmers. The ET also held a total of 15 GIs with randomly selected groups of farmers (see Table 1: Stakeholder KIIs, FGDs, and GIs by Stakeholder Group).

1. **Beneficiary farmer groups:** The ET conducted 18 FGDs with beneficiary farmer groups stratified by value chains and state, and randomly selected from a sample frame of 6,613 of all farmer groups that included men, women, youth, or mixed groups engaged in the MARKETS II activity between 2012 and 2017. The ET determined this sample size based on time and level of effort (LOE) allotted for the evaluation. To select farmer groups for FGDs, the MARKETS II staff provided a list of all farmer groups to the ET. The list was organized by state, then ordered using Excel. Interviewees were selected using random number generation. Subsequently, the ET purposively selected three farmer groups per value chain in each selected state from the list generated. The ET also purposively selected groups to ensure inclusion of additional women and youth groups. Between Benue and Ondo States, there were three instances where the randomly selected farmer groups were replaced because of poor access to roads and intra-ethnic conflict. The final list of FGDs comprised one youth-only farmer group, nine women-only groups, and eight mixed groups of men and women farmers. In addition, the ET held GIs with beneficiary women's groups or women members of co-ed associations and youth associations, including three youth groups, five women's groups, and seven mixed groups.
2. **Non-beneficiary farmers groups:** The ET conducted FGDs with 49 non-beneficiary farmers (men, women, and youth) in all of the selected states. Beneficiary farmers identified non-beneficiary farmers during FGDs or GIs, and during the fieldwork. The final sample of non-beneficiary groups included cassava, cocoa, maize, sorghum, soybean, and rice value chain farmers that also consisted of three youth groups, five women's groups, and seven mixed groups.

3.1.4 Quantitative analysis

The ET extracted data from the MARKETS II baseline conducted in 2012 and available annual monitoring reports. Comparison of variances between baseline figures against MARKETS II monitoring data enabled the ET to assess the progress of MARKETS II, especially with respect to increased productivity of value chains, income, and gross margins derived from value chains. This data was processed and analyzed using Excel to determine changes in the values achieved for each indicator and progress made towards achieving expected results for objectives (see Annex C: Performance Monitoring Plan). This analysis focused on assessing the extent to which expected results were achieved. Where relevant, data was disaggregated and analyzed by sex (data for youth was incomplete and could not be analyzed).

3.1.5 Qualitative analysis

The ET analyzed data using NVivo software. The ET imported interview transcripts (in Word) into the NVivo interface and coded them using key research questions. Analyses included light text mining using text search and word frequency queries, explorations with maps, charts, clusters, and comparison diagrams.

3.2 EVALUATION LIMITATIONS

There are several limitations that may affect this evaluation, including:

1. **Scheduling:** The ET implemented this evaluation during the main farming season when farmers are occupied with field tasks. This was a scheduling challenge that restricted the number of FGDs and GIs held with farmers, especially with MARKETS II non-beneficiary farmers.
2. **Logistics:** Three farmer groups selected during the initial random selection were not accessible due to poor roads and/or conflict in Ondo and Benue States. The ET was forced to replace them, which may have introduced some selection bias.
3. **Time and Resources:** Due to time and resource limitations, the total number of beneficiary farmer groups in FGDs and GIs across the four selected states only represents a small sample

size of less than 5 percent of the total of 6,613 farmer groups. Furthermore, the sample included very limited numbers of women and youth. The small sample size presents challenges in applying findings to the total population of beneficiary farmer groups, especially in relation to women and youth. Given the timing and amount of time allocated to the evaluation field work, the evaluation team concentrated on the MARKETS II farming activities.

In response to the above limitations and to improve the robustness of its conclusions, where possible the ET triangulated its findings with data drawn from KIIs and activity monitoring reports.

4.0 FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

4.1 EQ I: WOMEN AND YOUTH

This section presents the ET's findings, conclusions, and recommendations related to the first EQ topic—Women and Youth. As per the MARKETS II revised Results Framework, the activity addressed women's empowerment through two related Project Intermediate Results (PIRs): 1) increased women's income in promoted agriculture value chains; and 2) increased women's access to and control of productive assets (see Annex I: MARKETS II Result Framework).

4.1.1 To what extent did MARKETS II address the problems of women's and/or youth participation in its programmed economic activities?

FINDINGS

Women

As described in the MARKETS II baseline survey findings, women are more likely than men to cultivate plots of less than one HA.¹¹ Because of this, the minimum cultivated land size required for women to qualify as MARKETS II beneficiaries was lowered to less than one HA. During a KII with activity staff, an interviewee explained that lowering the acreage size for women ensured that women farmers benefited from the activity.¹²

Public extension agents (EAs) employed by state government agricultural development programs and private service providers assisted activity staff to identify women's and mixed (men and women) associations for engagement as MARKETS II beneficiaries. During KIIs with EAs, interviewees described that MARKETS II provided them with basic guidelines for selecting associations—stipulating that the total overall population of farmers within MARKETS II interventions should consist of equal numbers of men and women (50/50). The ET's findings showed that the preponderance of men in existing association memberships meant that, in some cases, the EAs were forced to support expansion of these associations to include greater women's participation or create new ones. This is reflective of the constraints women face in accessing resources. During a KII, a woman EA in Kaduna State said the activity criterion meant that she had to make a concerted effort to recruit women farmers not already members of an association to join existing associations or establish one.¹³ During another KII, a woman EA in Kano State described the request to recruit women farmers as “overwhelming,” requiring her to support several women to establish associations that then became activity beneficiaries.¹⁴ A male EA said in a KII that in Kano State all farmers, including women and youth, were reached through associations.¹⁵ This approach of reaching women farmers through associations reflects MARKETS II PIR I.I, which focuses on building capacity of smallholders through strengthening associations.¹⁶

¹¹ “MARKETS II Baseline Survey Report,” Chemonics for USAID, October 31, 2013.

¹² KII, MARKETS II Staff, FCT, July 31, 2017, Abuja.

¹³ KII, Woman Extension Agent, Kaduna State, July 26, 2017.

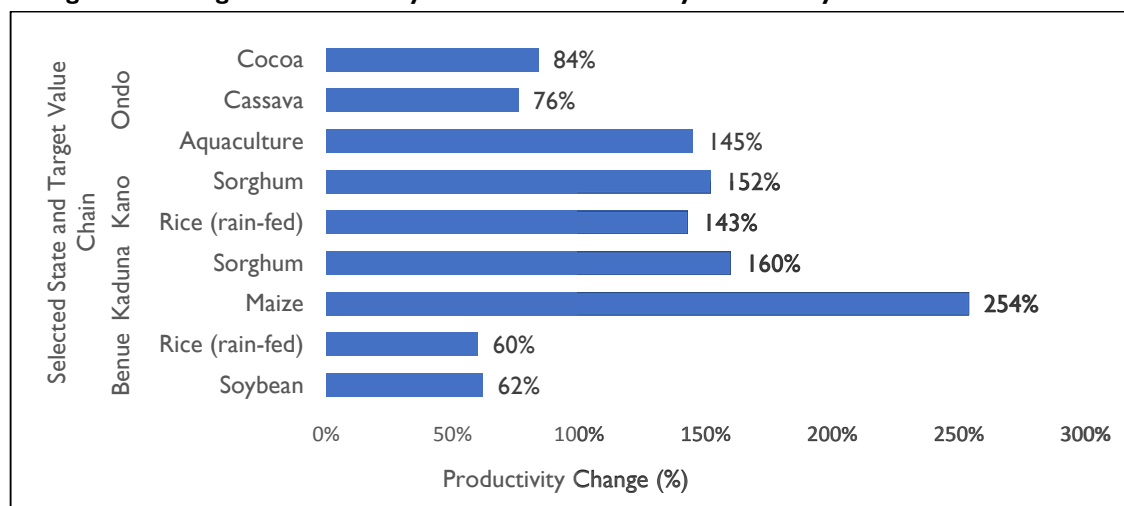
¹⁴ KII, Woman Extension Agent, Kano State, July 28, 2017.

¹⁵ KII, Man Extension Agent, Kano State, July 28, 2017.

¹⁶ “MARKETS II Six-Month Work Plan April 18 to September 30 2012,” Chemonics for USAID, June 2, 2012.

Review of activity reporting data shows increased productivity for women in all four selected evaluation states across all target value and sub-value chains between 2012 and 2016 (see Figure 1). Reported changes in productivity range from 60 percent for rain-fed rice in Benue State to 254 percent for maize in Kaduna State. All changes for each value chain exceed 50 percent, and KIIs and FGDs corroborated this data.

Figure 1: Change in Productivity of Women Beneficiary Farmers by Value Chain 2012-2016



Source: "MARKETS II Baseline Survey Report" Chemonics for USAID, October 31, 2013 and "MARKETS II Quarterly Report January-March 2017"

During a KII, the woman EA working in the rice value chain in Kano State said that the women have experienced "tremendous increases in yields from their farmers since contact with MARKETS II."¹⁷ In FGDs, women farmers indicated that such increases were accompanied by improvements in crop quality. For example, in one FGD with women cocoa farmer members at the *Ifedayo Ala* Multipurpose Association in Ondo state, interviewees said that applying new farming techniques on their cocoa farms generated increases ranging from 1,500 kilograms (kg) to 2,000 kg of cocoa beans (an approximately 33 percent increase in productivity) and improved the quality of their cocoa beans.¹⁸

Similarly, women cocoa farmer members at the *Kajola Aponmu* Association in Akure South, Ondo State, said that before MARKETS II they harvested only one bag of cocoa beans; in 2017, however, they harvested more than five bags of higher quality beans on the same land.¹⁹ This productivity increase was corroborated by a KII with the service provider in Ondo State (Conservation Alliance Nigeria), who said that by applying new farming methods²⁰ cocoa farmers have been harvesting more from the same farms. In one FGD with soybean farmers at the *Ibatyo Soya Bean Growers'* Cooperative in Benue State, women described harvesting 50 kg of soybean before MARKETS II, and at least 250 kg on the same extension of land after MARKETS II.²¹ MARKETS II activity reporting data also shows increased income for women across all target value and sub-value chains in all four selected evaluation states. Changes in income range from 5 percent for cocoa in Ondo State to 1,524 percent for soybean in Benue State, as shown below in Figure 2.

¹⁷ KII, Woman Extension Agent, Kano State, July 28, 2017.

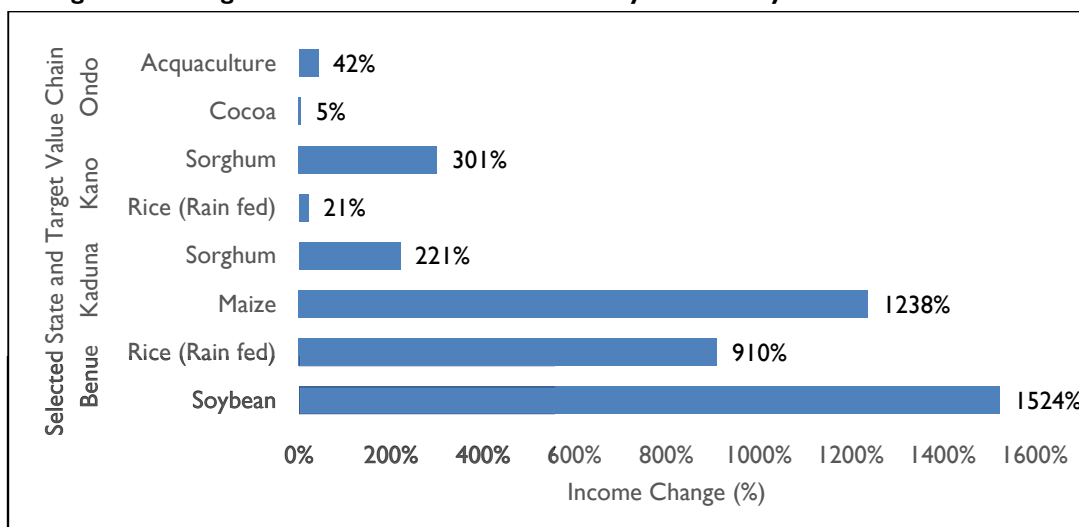
¹⁸ FGD, Women Farmers, *Ifedayo Ala* Multipurpose Cooperative, Ondo State, September 5, 2017.

¹⁹ FGD, Women Cocoa Farmers, *Kajola Aponmu* Multipurpose Cooperative, Akure South, Ondo State, September 5, 2017.

²⁰ KII, MARKETS II Service Provider, Ondo State, August 7, 2017.

²¹ FGD, Women Soybean Farmers, *Ibatyo Soya Bean Growers'* Cooperative, Benue State, September 1, 2017.

Figure 2: Change in Income of Women Beneficiary Farmers by Value Chain 2012-2016



Source: "MARKETS II Baseline Survey Report," Chemonics for USAID, October 31, 2013 and "MARKETS II Quarterly Progress Report January to March 2017," (selected data from Benue, Kano, Kaduna, and Ondo States).

During one KII, a service provider (Conservation Alliance Nigeria) in Ondo State said that since contact with MARKETS II interventions, cocoa farmers no longer dump poor quality beans they cannot sell.²² In FGDs, women farmers described how the increased productivity and better quality resulted in increased incomes. Women sorghum farmers at the *Katsina I* Multipurpose Cooperative in Kaduna State stated that they received "*a good price*" for their sorghum because of the improved varieties introduced by MARKETS II. They said they earned higher incomes due to increased quantities resulting from improved productivity.²³

In FGDs with women cocoa farmers at *Ifedayo Ala* and *Kajola Aponmu* Cooperative Societies in Ondo State, interviewees described how increased productivity and higher quality cocoa beans led to "*premium prices*" from processors (off-takers) purchasing beans for fermentation.²⁴ In one FGD in Kano state, women farmers at the *Zaman Lafiya Umma* Rice Cooperative stated that harvesting more rice means, "*we have more to sell, and this brings in increased income.*"²⁵ In one FGD with women soybean farmers at *Uchi Mbakor* Beekeeping Cooperative in Benue State, interviewees stated that they earned more income from soybean crops through MARKETS II interventions in selections of varieties and agronomic practices.²⁶

By improving women's access to resources through increased association participation, the productivity and crop quality improvements led to increased income, which generated positive changes in women beneficiary livelihoods. For example, in one FGD with women sorghum farmers at *Gidan Gunda* Multipurpose Cooperative in Kano State, interviewees described how increased incomes enabled them to purchase four cows to plow their fields, which reduced their tillage cost. The women added that the group earns additional income by leasing the cows to non-members in their community to provide plowing services.²⁷

In addition, the women farmers indicated that individual members of the same association invested their increased incomes by setting up businesses, like tailoring, for their daughters. These businesses provide their daughters with an independent source of income and reduce dependency on their husbands. In turn, this increases their household decision-making power and allows them to set up other business, like operating grinding machines, for themselves. In FGDs in Benue State, women

²² KII, MARKETS II Service Provider, Ondo State, August 7, 2017.

²³ FGD, Women Sorghum Farmers, *Katsina I* Multipurpose Women's Cooperative, Kaduna State, September 8, 2017.

²⁴ FGDs, Women Cocoa Farmers, *Ifedayo Ala* and *Kajola Aponmu* Cooperative Societies, Ondo State, September 5, 2017.

²⁵ FGD, Women Rice Farmers, *Zaman lafiya Umma* Rice Cooperative, Karofi Chirmomawa LGA, Kano State, September 7, 2017.

²⁶ FGD, Women Soybean Farmers, *Uchi Mbakor* Beekeeping Cooperative, Benue State, August 31, 2017.

²⁷ FGD, Women Sorghum Farmers, *Gidan Gunda* Multipurpose Cooperative, Kano State, September 5, 2017.

rice farmers at *Ibatyo* and *Akwete* Cooperatives said that increased productivity allowed them to retain some rice, which they cook at Christmas. Increased income also means they can pay medical bills. They also used the added income to reinvest in an orange farm, which the groups have established.²⁸ In the FGD with women cocoa farmers at *Kajola Aponmu* Multipurpose Cooperative, Ondo State, interviewees said they were able to build houses, buy cars, send their children to universities abroad, and buy land—all with their increased incomes.²⁹

Youth

A review of MARKETS II documents by the ET revealed that youth in Nigeria are reluctant to engage in farming, which they consider a low status and low-income occupation.³⁰ However, data in the MARKETS II reports reviewed was not disaggregated by age for productivity and income. Data from FGDs with young people engaged in all target value chains shows that participants described increased production and income by applying MARKETS II training to their farms. They went on to say that applying MARKETS II training improved opinions about agriculture. This is demonstrated by young people re-investing their additional income earned into expanded farming and processing activities.

In FGDs with male youth farmers at *Dabur Farmers'* Cooperative in Benue State, interviewees stated that rice productivity on their farms increased by 100 percent when they applied MARKETS II techniques. This led them to increase their acreage under cultivation through re-investment of their revenues in additional hired labor.³¹ One interviewee at this cooperative indicated that, in addition to increasing his acreage, the income helped him buy a house, marry, and purchase a car. As a result, his opinion of farming went from “negative” to “positive.” In Kano State, male youth farmers at the *Bunkure Hima* Tomatoes Cooperative and young female farmers at the *Baraya* Women’s Cooperative (growing rice and sorghum, respectively) also described increased productivity on their farms resulting from adoption of MARKETS II activities. The young men stated they re-invested their income to acquire additional acreage—going from less than a HA to one full HA of dry season tomato farming. The young women farmers re-invested incomes from agricultural sales into providing loans for women association members to pay school fees and expand parboiling businesses.

“During the dry season, we invest money made from farming in rearing goats and sheep which is less stressful than farming. We even give loans to members. One of our members was admitted to the College of Education in Kumbotsho, Kano State and applied for 30,000 Naira, while another member has requested a loan of 40,000 Naira to invest in her rice parboiling business. We use part of our money from our cooperative farm for such social issues to assist each other when needed.”³²

During a KII, the woman EA in Kano said that youth farmers frequently re-invest income from sales of increased yields into dry season farming and, when the prices are low, into purchasing and storing rice for re-sale later.³³ A male EA interviewed in Kano State said that youth farmers invest in small ruminants such as goats or fattening cattle, which are sold to purchase farm inputs for the next farming season. The interviewee also stated that some young women farmers purchased grinding or spaghetti making machines with their increased income.³⁴

CONCLUSIONS

By focusing on women’s access to resources, including access to land and association membership, MARKETS II significantly addressed constraints that hinder women’s participation in its programmed

²⁸ FGD, Women Rice Farmers, *Ibatyo* Cooperative and *Akwete* Rice Farmers Cooperative, Benue State, September 1, 2017.

²⁹ FGD, Women Cocoa Farmers, *Kajola Aponmu* Multipurpose Cooperative, Akure South, Ondo State, September 5, 2017.

³⁰ See for example, Edoka, M.H., S.D. Otajele, S.O. Adejo “The Roles of Nigerian Youth in Food Production,” *Journal of Environmental Issues and Agriculture in Developing Countries*, Volume 3, Number 1, April 2011 and Adesina, Dr. Akinwumi “Transforming Nigeria’s Agriculture,” *Agriculture and Food Security Center*, Columbia University, September 10, 2013.

³¹ FGD, Youth Rice Farmers, *Dabur Farmers'* Cooperative, Udei, Guma LGA, Benue State, September 2, 2017.

³² KII, Woman Extension Agent, Kano State, July 29, 2017.

³³ KII, Woman Extension Agent, Kano State, July 29, 2017.

³⁴ KII, Man Extension Agent, Kano State, July 28, 2018.

agricultural economic activities. Likewise, by demonstrating the profitability of farming to youth, the activity addressed the problem of youth participation in planned agricultural sector activities.

RECOMENDATIONS

- Future agricultural activities and projects targeting women in Nigeria should build on MARKETS II's success in specifically addressing constraints women have to accessing resources required for successful farming and agricultural business opportunities. They should do this by tailoring requirements for participation to women's prevailing resource levels, including land size, time, and association membership, and offer discreet technical assistance to women.
- Future activities targeting youth in Nigeria should start by sharing success stories to convince and motivate young people to engage in farming and in agricultural sector as a viable option for improving incomes.

4.1.2 Which approaches have been most effective in reaching women and/or youth?

FINDINGS

Total Number of Women and Youth Reached

Review of activity reporting data show that MARKETS II reached a total of 1,190,782 farmers (79.6 percent) of its target of approximately 1.5 million farmers (about 750,000 men and women each). The activity exceeded its target of achieving equal numbers of women and men farmers by reaching more women farmers (N=738,285), which is 62 percent of total farmers reached. This also represents a 98.7 percent achievement of the activity's target for reaching women farmers. The activity also reached its target of 30 percent youth participation, with the actual number of youth reached being 357,235, or 79.6 percent of its target of 449,000 youth farmers (see Table 2).

Table 2: Total Direct Beneficiaries Reached by MARKETS II by Women and Youth

Direct Beneficiaries	Life of Activity TARGET	Life of Activity ACTUAL	Variation
Total Farmers Reached	1,495,624/a	1,190,782/b	79.6%
Total Women Reached	747,812/c	738,285/d	98.7%
Share of Women Reached (%)	50%	62%	12.0%
Total Youth Reached	448,687/e	357,235/f	79.6%
Share of Youth Reached (%)	30%	30%	0%

a. Life of Activity Target data cited in "MARKETS II Performance Management Plan (PMP) (Sixth Submission)," Chemonics for USAID, December 2016.

b. Life of Activity Actual data cited "MARKETS II Quarterly Progress Report January to March 2017," Chemonics for USAID, April 28, 2017.

c. 50 percent of total individuals reached by the project cited in "MARKETS II Performance Management Plan (PMP) Sixth Submission," Chemonics for USAID, Dec 2016.

d. Indicator: GNR 2 data cited in "MARKETS II Quarterly Progress Report January to March 2017," Chemonics for USAID, April 28, 2017.

e. Thirty (30) percent youth to be reached cited in "MARKETS II Performance Management Plan (PMP) (Sixth Submission)," Chemonics for USAID, December 2016.

f. Life of Activity Actual calculated as 30 percent of target.

Women

MARKETS II engaged its beneficiaries through agricultural Cooperative Societies. Women farmers were not incorporated on an individual basis. In both co-ed and women alone cooperatives, they were integrated *en masse* into the activity through their respective cooperatives and in the case of co-ed cooperatives, along with their male counterparts. In FGDs, women members of the Agevashi Soya Bean Growers Cooperative in Benue State described how the cooperative Chairman presented the EAs' invitation for them to participate in MARKETS II training during a general meeting.³⁵ In FGDs, women farmers described the same process at both the Aretumi Multipurpose Cooperative in

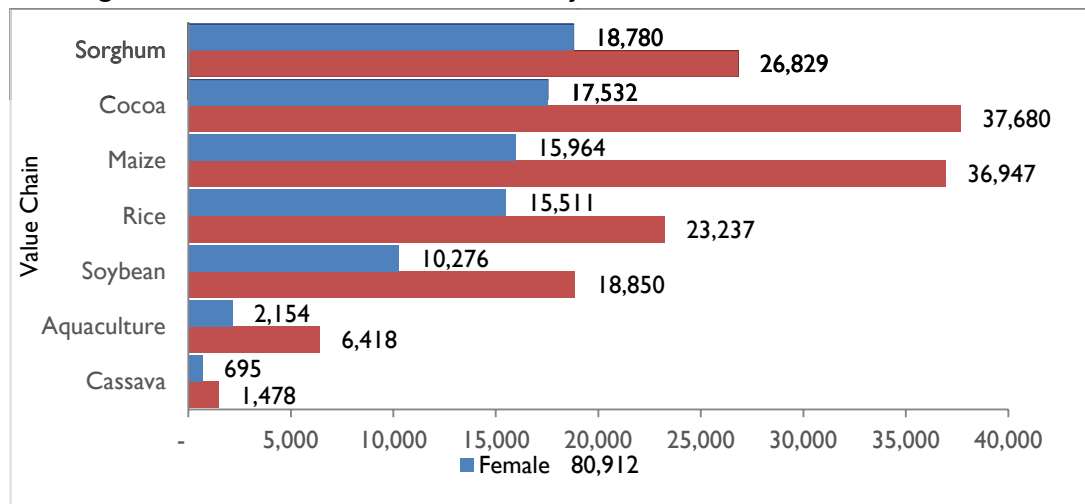
³⁵ FGD, Woman Soybean Farmers, Agevashi Soya Bean Growers Cooperative, Benue State, August 31, 2017.

Ondo State and the *Gidan Gunda* Farmers' Cooperative in Kano State, and the *Katsina* I Multipurpose Women's Cooperative in Kaduna State.³⁶

Although MARKETS II exceeded its target of women farmers reached, there was universal agreement in FGDs with women interviewees in all four selected evaluation states that, if participation had not been restricted to association members, more women could have been reached. These women stated that they would have invited other (non-member) women in their communities to participate in activities if they had been allowed to do so.³⁷ They also stated that, in many cases, non-member women farmers inquired about the practices they had adopted. The results of MARKETS II beneficiary farms attracted other farmers who not only wanted to learn new farming techniques but also wanted to access the varieties of seeds used by MARKETS II beneficiaries. According to comments in FGDs, some women farmers only became aware of MARKETS II in 2016 (four years into the activity) by observing activity components in their communities. For instance, non-beneficiary women farmers interviewed at Uchi Mbakor in Benue State said they found out about the activity after observing new planting techniques in beneficiary farmers' fields and by hearing about the improved variety of soybean these farmers were planting.³⁸ These women stated that even though they were not beneficiaries of MARKETS II, they decided to attend the FGD because they wanted to be part of MARKETS II.³⁹

Between 2012 and 2017, across all seven target value and sub-value chains in the selected evaluation states, 232,351 farmers in total were reached—including 80,912 women and 151,439 men farmers. The sorghum value chain had the highest number of women reached—18,780. Cocoa followed at 17,532, and rice, at 15,511, came third. The lowest numbers of women were found in aquaculture, 2,154, and cassava, 695. Figure 3 has these details. The number of women participating in the sub-value chains was 15,963 for maize and 10,276 for soybean.

Figure 3: Men and Women Beneficiaries by Value Chain in Selected Evaluation States



Source: "MARKETS II Quarterly Progress Report January to March 2017," (selected data from Benue, Kano, Kaduna, and Ondo States).

However, in terms of proportional representation, the value chain with the largest share of women is sorghum, at 41 percent (split most closely between men and women), followed by rice (40 percent) and cocoa and cassava (32 percent). Proportional representation of women in the sub-value chains was 35 percent for soybean and 30 percent for maize. Finally, in the four selected evaluation states, only 25 percent of aquaculture farmers were women (see Table 3). These proportional representational levels reflect the social and cultural traditions that constrain women's participation in certain agricultural activities. However, in FGDs no women interviewees described overcoming

³⁶ FGDs, Woman Farmers, *Aretumi* Multipurpose Cooperative in Ondo State, September 4, 2017, *Gidan Gunda* Farmers' Cooperative, Kano State, September 5, 2017 and *Katsina* I Multipurpose Women's Cooperative, Kaduna State, September 8, 2017.

³⁷ For example, FGDs, Women Cocoa Farmers, *Ifedayo Ala* and *Kajala Aponmu* Cooperative Societies, Ondo State, September 5, 2017.

³⁸ FGD, Non-Beneficiary Women Farmers, Uchi Mbakor, Benue State, July 31, 2017.

³⁹ Ibid.

these constraints by initiating farming activities in new target value chains.

Table 3: Men and Women Beneficiaries by Value Chain in Selected Evaluation States

Value Chain	Men	Women	Total	Variation (%)
Sorghum	26,829	18,780	45,609	41%
Rice (rain-fed)	23,237	15,511	38,748	40%
Soybean	18,850	10,276	29,126	35%
Cocoa	37,680	17,532	55,212	32%
Cassava	1,478	695	2,173	32%
Maize	36,947	15,964	52,911	30%
Aquaculture	6,418	2,154	8,572	25%
Total	151,439	80,912	232,351	35%

Source: "MARKETS II Quarterly Progress Report January to March 2017," (selected data from Benue, Kano, Kaduna, and Ondo States).

EAs described working closely with women farmers to ensure they applied new agronomic practices introduced by MARKETS II correctly. These included, for instance, using new varieties of sorghum in Kano State, and new ways of transplanting rice in Benue State. Other practices introduced were recommendations for types of fertilizer, and the associated practices like burying fertilizer instead of spraying, appropriate quantities and timing of application, recommended pest and disease control, timely management of labor practices, and promoting new harvesting and threshing methods.⁴⁰ Some EAs also described supporting the commercialization process in ways that include linking farmers to processors (off-takers), and helping beneficiary farmers improve prices for their crops. For example, during a KII, an EA in Kaduna State explained that she always compared prices offered by off-takers to prevailing prices on the open market. Then she advises the associations on which site offered the highest price. She stated that the result was that farmers obtained higher per unit prices.⁴¹

Women farmers said that the EAs were a valuable resource for technical assistance throughout the duration of the project and that they helped support them through several farming seasons.⁴² They said the tailored focus agents had on their distinct needs, including their limited access to land and association membership, was essential. For example, without the EAs' dedicated assistance, women farmers in Kano and Benue States implied that receiving access to new sorghum varieties or new ways of transplanting rice would have been unlikely.⁴³

Youth

Respondents in the youth FGDs and GIs said their existing associations were invited through the EAs. In Ondo State, the *Osaka Youth Group* in Akure North local government area (LGA) was the only youth group of the four included in FGDs and GIs reached through a local service provider, Ark Shore. There were far lower numbers of EAs facilitating association membership to engage youth farmers than there were for women. However, two of the four were created through EA support. These are the *Baraya Women's Farmers Multipurpose Society* and the all-men *Bunkure Hima Tomatoes Multipurpose Society*, both in Kano State.⁴⁴ Subsequently, with EA support, both groups became Cooperative Societies and, ultimately, both became activity beneficiaries.

In contrast to the noted expansion of overall women's participation through associations, expansion of young women's participation was limited. During a KII, a woman EA in Kaduna who worked in the soybean sub-value chain, stated that young women farmers constituted about 10 percent of all farmers. The same informant said it was difficult to get young women interested in joining the

⁴⁰ For example, KII, Extension Agent, Kano, July 28, 2017 and KII, Extension Agent, Kaduna, July 26, 2017.

⁴¹ KII, Woman Extension Agent, Kaduna State, September 9, 2017.

⁴² For example, FGD, Women Sorghum Farmers, *Gidan Gunda* Multipurpose Cooperative, Kano State, September 5, 2017 and FGD, Women Rice Farmers, *Ibato* Cooperative and *Akwete Rice Farmers Cooperative*, Benue State, September 1, 2017.

⁴³ Ibid

⁴⁴ FGDs, Men and Young Women Farmers, *Baraya Young Women's Cooperative* and *Bunkure Hima Tomatoes Cooperative*, Kano State, July 29, 2017.

associations because, traditionally, only men worked on farms in many parts of Kaduna State.⁴⁵ This sentiment was further corroborated by young women at *Zumunchi* Multipurpose Society in Jaji Igabi LGA, Kaduna State, and by women in the *Aretumu* Multipurpose Cassava Cooperative in Ondo State. Both groups said young women predominantly process cassava but do not farm it.⁴⁶

“The challenge is that it is difficult to get young women farmers as they are not interested in farming because of culture, so one needs to keep persuading them to join farming cooperatives.”⁴⁷

Young people in internally displaced person (IDP) camps in the FCT were also reached through training on homestead farming. Because they had no access to land, this was considered the most appropriate technique. They were taught how to grow basic food items, like vegetables, in container gardens using pots instead of land.⁴⁸

The young people in Kano State who participated in FGDs explained that there is a high concentration of young people at other points of the value chains like rice processing. These youths are not involved in the production aspect and could only have been reached if the activity worked at these other value chain points.⁴⁹ For instance, in the cassava associations in Ondo State, the two young women in the FGDs said that most young women do not farm cassava, but instead purchase and process it for sale.⁵⁰

“Young women are mostly into buying and processing cassava into gari or flour for sale rather than growing cassava. Even women who farm cassava still buy it for processing to sell as this brings more money than selling the tubers.”⁵¹

This was evident in the fact that only two women in the cassava farmers FGD in Ondo State were young. More young women they said could have been reached if **MARKETS II** had looked beyond just the production point of the value chain.⁵²

CONCLUSIONS

MARKETS II's strategy to reach women and young people is through farmer associations identified by the EAs. This approach was successful, as evidenced by the fact that the activity reached 62 percent of women, which exceeded its target of reaching 50 percent and also achieved its target of reaching 30 percent of youth out of the total number of farmers reached.

Both women and young people valued the increased and more effective assistance from EAs to improve productivity and profitability. It took some time for the program's activities to attract other participants, but eventually the increased production became a success story that helped engage more women and young people through observation of farmer association activities.

The program also was successful in engaging women in target value and sub-value chains where they were already working, such as sorghum, but, also, increased the participation of women in cocoa and maize production.

RECOMMENDATIONS

Women

The **MARKETS II** strategy for reaching women through farmer groups should be taken forward as it enabled the project to exceed its 50 percent target for women beneficiaries. Building on this strategy and applying multiple other creative approaches would enable future projects to reach even more

⁴⁵ KII, Woman Extension Agent, Kaduna State, July 26, 2017.

⁴⁶ FGDs, Young Women Farmers, *Zumunchi* Multipurpose Cooperative, Kaduna State, September 9, 2017 and FGD, Youth Farmers, *Aretumi* Multipurpose Society, Ondo State, September 5, 2017.

⁴⁷ KII, Woman Extension Agent, Kaduna State, July 26, 2017.

⁴⁸ KII, **MARKETS II** Staff, Abuja, FCT, July 31, 2017.

⁴⁹ For example, FGDs, Young Women Farmers, *Baraya* Young Women's Cooperative and Youth Farmers, *Bunkure Himma* Tomatoes Cooperative, Kano State, July 29, 2017.

⁵⁰ FGD, Youth Farmers, *Aretumi* Multipurpose Society, Ondo State, September 5, 2017.

⁵¹ FGD, Youth Farmers, *Aretumi* Multipurpose Society, Ondo State, September 5, 2017.

⁵² FGD, Young Women Farmers, *Baraya* Young Women's Cooperative, Kano, July 29, 2017.

women. One such approach would be the retention and scale up of the use of EAs to identify farmer associations as beneficiaries of an intervention. This was MARKETS II's main approach and it successfully attracted over 65,000 women in the evaluation states—shown in Figure 1, above. EAs should also actively engage in clustering women identified and invited by beneficiaries and support them to establish associations so they can benefit in future interventions.

Future interventions could also identify beneficiary farmers' social networks as entry points for reaching out to and involving more women farmers in activity components. An approach like this would provide new strategies to beneficiary farmers, ones which would enable them to invite other women into future interventions and, subsequently, establish new associations. New associations, in turn, could benefit all the beneficiary farmers—new and old—and would ensure women who otherwise might be missed by the EAs are identified and invited.

MARKETS II reached more women in the cocoa, maize, and sorghum value and sub-value chains indicating that more women are involved at the production point in these value chains, and future interventions should focus on these commodities. Other points along these value chains where women are concentrated should also be targeted by future interventions to ensure more women are reached. In value chains where more women are found at the processing points, those points should be the focus.

Involving local stakeholders and potential partner organizations at the activity formulation and design stage is also crucial. More specifically, women's groups' input should be sought at the formulation stage. This is especially true of groups related to agricultural development—including those involved in small-scale production on limited plots or land, and groups of women involved in food processing. Their involvement might ensure that proposed activity implementation strategies have the means and capacity to reach and cooperate effectively with women beneficiaries. In this case, the beneficiaries are smallholder women farmers in rural communities in Nigeria.

Promoting components of the activity and initiatives at an early stage should be an essential action during implementation.

Youth

While the MARKETS II strategy for reaching young people should be retained and taken forward by future interventions, a broader strategy would enable interventions to reach more young people. This strategy would include MARKETS II's approach of specifically targeting a share of young people to reach and disaggregating this share by sex. It would also incorporate additional approaches.

Young people who have successfully adopted MARKETS II technologies should become the face of subsequent interventions. Social media and community open days would allow these young farmers to be popular role models ("open days" are held in communities on a designated farm where MARKETS II partners showcase good practices and distribute farm inputs). Another approach should be to reach young people at points of the value chains other than production. For instance, young women in some locations are concentrated in rice parboiling and cassava processing. A focus on these points of the chain will enable future interventions to reach more young people. It would also bring in more non-farming youths who would be attracted by friends' increased incomes. Processing activities have relatively quicker returns on investments than production and are more attractive to young people.

MARKETS II interventions like beekeeping and pollination in soybean farming and spraying gangs in the cocoa value chain were not key intervention activities for MARKETS II. However, they have great potential for reaching more young people. Future interventions should adopt these sub interventions, which MARKETS II specifically directed to beneficiaries. Future interventions should also open sub interventions to non-beneficiaries as a way to reach more young people. Beekeeping and cocoa spraying would attract potential young farmers as these activities are less labor-intensive, give quick returns, and repayment of capital investment on loans is made in kind (like honey for beekeeping).

Additionally, future projects should specifically encourage establishment of young women's

associations to reach young women farmers or processors. This approach should encourage these young women's associations to establish group farms to nurture young women's interest in farming. Income from such group farms could become incentive for more young women to own their own farms and attract still more young women. In turn, this would allow projects to meet their target for reaching young people. Young people at other points of the value chain should also be encouraged to establish processor/services associations. For instance, a service association may be one where the young people are agro-dealers in their communities.

4.1.3 How have women and/or youth benefitted from MARKETS II implementation?

FINDINGS

Women

Across the value chains and areas visited, women farmers in the 14 groups interviewed during FGDs noted that they benefited from MARKETS II interventions. The consensus among all women farmers was that activity trainings were immensely valuable for learning new farming practices, and that the adoption of new practices, such as planting, spacing, fertilizer application methods, timing of fertilizer applications, harvesting practices, etc., led to increased yields.⁵³ The quarterly reports confirmed this. The MARKETS II January to March 2017 Quarterly Progress Report (Q2 FY2017) shows that under the Feed the Future standard indicators “EG 3.2-17 [Feed the Future 4.5.2-5]: Number of farmers and others who have applied new technologies or management practices because of USG assistance,” for the year 2017, 324,223 farmers applied new technologies. Of those, 56 percent were women. Of the 22,398 farmers who received short-term agricultural productivity training, 39 percent were women. Women members of the Agevashi Multipurpose Cooperative, Mbakor in Tarka, LGA of Benue State, said they recorded increased yields on the same size farms they cultivated before contact with MARKETS II. By applying the new technologies and practices introduced by MARKETS II, such as planting, spacing, type of fertilizer, application method and timing of application, etc., their average of 200 kg of soybean harvested rose to 400 kg of soybeans on the same 0.60 HA of land.⁵⁴ Validated results from MARKETS II data presented in Table 4 show the productivity of women farmers [metric ton (MT)/HA], based on average change between 2012 and 2016. As the Table 4 demonstrates, women performed better (126.2 percent) than men (103.2 percent).

For women members of the Akwete Akpa Rice Farmers Cooperative in Otukpo LGA, Benue State, and benefits included dividends from the association rice farm.⁵⁵ They explained that these dividends were in the form of rice, which was distributed to members to celebrate Christmas in 2016 and enabled all village families to cook rice for the holiday. This is in contrast to the 2015 Christmas when several families had no rice. All association members also received cash dividends—although the women could not state how much each woman received. The association cultivated its group rice farm in 2017 and plans to continue increasing its acreage for rice farming business.⁵⁶

Besides increased yields from applying the new MARKETS II technologies and practices (clearing and preparing the farm, using the MARKETS II seed variety, using new planting techniques, application of fertilizers, using appropriate herbicides, harvesting techniques, and storage), all women members of the Gidan Gunda Multipurpose Cooperative in the FGD in Chirmomawa LGA, Kano State,⁵⁷ said they adopted the new technologies on their main sorghum farms, and applied activity-supported technologies and practices to other crops, which led to increased yields. The ET was unable to quantify or verify the extent of improved productivity yields in other crops since the activity focused on select value chains.

Women farmers in all FGDs across all four states said that increased yields led to increased income. Increases in productivity and incomes across area visited by the ET are shown in Table 4 and

⁵³ FGD, Women Sorghum Farmers, *Gidan Gunda* Multipurpose Cooperative, Kano State, September 5, 2017.

⁵⁴ FGD, Women Soybean Farmers, Agevashi Soya Bean Growers Cooperative, Benue State, August 31, 2017.

⁵⁵ FGD, Women Rice Farmers, Akwete Akpa Rice Farmers Cooperative, Benue State, September 1, 2017.

⁵⁶ Ibid.

⁵⁷ FGD, Women Sorghum Farmers, *Gidan Gunda* Multipurpose Cooperative, Kano State, September 5, 2017.

support these findings. Productivity increased across all value chains in all areas. This is indicated by the increase between 2012 (the baseline) and the average yields (2014-2016). Increases were highest for women farmers in the maize sub-value chain, where average productivity increased by 254 percent, followed by sorghum, which increased by 160 percent. Rain-fed rice recorded the lowest productivity increase in Benue at 60 percent, which was still above 50 percent. Aquaculture shows high productivity yield at 145 percent, even though it is not one of the top three value chains with highest productivity. Aquaculture productivity yield in evaluation states was higher for women farmers, with men only achieving 97 percent.

Table 4: Change in Productivity of Farmers by Sex, Selected State, and Value Chain (MT/HA)

State	Value Chain	Baseline (2012)		2014 2016 (Average)		Change (2012 to 2016) (%)	
		Men	Women	Men	Women	Men	Women
Benue	Soybean	1.08	0.84	1.38	1.36	28	62
	Rice (rain-fed)	2.61	2.84	4.47	4.55	71	60
Kaduna	Maize	1.36	1.15	4.30	4.07	216	254
	Sorghum	1.08	0.84	2.12	2.18	97	160
Kano	Rice (rain-fed)	2.61	2.84	6.73	6.90	158	143
	Sorghum	1.08	0.84	2.23	2.11	107	152
Ondo	Aquaculture	1.08	0.84	2.13	2.06	97	145
	Cassava	11.07	11.50	22.60	20.22	104	76
	Cocoa	0.40	0.34	0.60	0.63	51	84

Sources: "MARKETS II Baseline Survey Report," Chemonics for USAID, October 31, 2013 and "MARKETS II Quarterly Progress Report January to March 2017," (selected data from Benue, Kano, Kaduna, and Ondo States).

For women members of the *Ifedare* Multipurpose Cooperative Society in Akure North LGA, and the *Kajola* Aponmu Cocoa Farmers Group in Akure South LGA of Ondo State, adopting new technologies and practices led to better quality cocoa beans for off-takers. Before MARKETS II, beans did not meet off-takers' requirements. These women said the linkages to off-takers ensured them premium prices for the cocoa beans.⁵⁸ A cocoa off-taker said that the quality of cocoa supplied by MARKETS II cocoa farmers improved, and now the cocoa they received was a higher quality and met off-takers standards. Conservation Alliance, the service provider in Ondo State working with the cocoa value chain, also said the quality of the cocoa beans produced by activity-supported farmers was acceptable to the off-takers. The women cocoa farmers adopted new technologies such as sweeping, pruning, spraying, harvesting, and new methods of storage.⁵⁹

The increases in productivity, as presented in Table 4, led to increases in agricultural incomes (Table 5). Even though incomes fluctuated and varied across value chains and states, women still experienced increased incomes during the activity. Table 5 and Figure 4 show that, in general, there was an upward trend of increasing per capita incomes earned by beneficiary farmers from all value chains. Highest incomes were for women in the soybean value chain in Benue, followed by maize in Kaduna States. The increase was below 50 percent for rain-fed rice, aquaculture, and cocoa—even though women in cocoa FGDs said they had better quality cocoa beans due to MARKETS II, and that the improved quality attracted premium price from off-takers.

Table 5: Farmer Income in Selected State by Value Chain (Naira)

State	Value Chain	2014		2017		Change (%)	
		Men	Women	Men	Women	Men	Women
Benue	Soybean	66,744	84,086	918,490	1,365,211	1,945	1,524
	Rice	508,188	585,874	1,236,294	5,916,613	143	910
Kaduna	Maize	269,121	288,382	2,545,308	3,859,878	846	1238
	Sorghum	140,812	154,256	214,124	495,749	52	221

⁵⁸ FGDs, Women Cocoa Farmers, *Ifedayo Ala* and *Kajola Aponmu* Cooperative Societies, Ondo State, September 5, 2017.

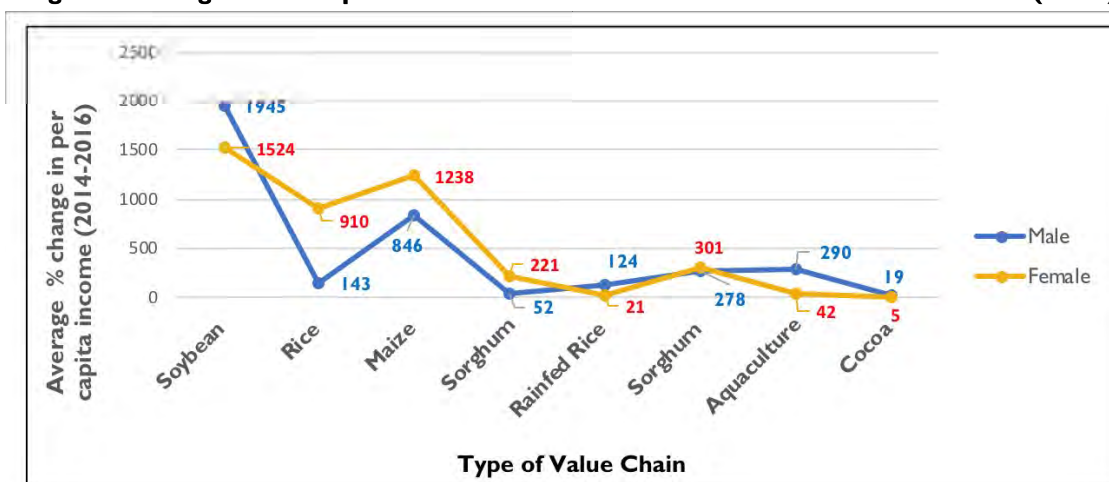
⁵⁹ KII, MARKETS II Service Provider, Ondo State, August 7, 2017.

State	Value Chain	2014		2017		Change (%)	
		Men	Women	Men	Women	Men	Women
Kano	Rice (rain-fed)	358,072	367,473	802,281	446,445	124	21
	Sorghum	132,670	123,769	501,671	495,749	278	301
Ondo	Cocoa/a	628,105	502,485			19	5
	Aquaculture/b			3,243,290	1,569,111	290	42

Sources: "MARKETS II Baseline Survey Report," Chemonics for USAID, October 31, 2013 and "MARKETS II Quarterly Progress Report January to March 2017," (selected data from Benue, Kano, Kaduna, and Ondo States).

Overall, in the four evaluation states, women soybean farmers from Benue State saw the highest change in per capita income. This is followed by women maize farmers from Kaduna and women rice farmers from Benue. The rice value chain and the soybean and maize sub-value chains are important for increasing women's incomes, and soybean is the highest. These increases enabled the women to re-invest in other micro-businesses, like trading provisions and clothing, purchasing sewing machines for tailoring businesses, and acquiring assets, such as cows and small ruminants.⁶⁰ Some women established businesses for their children. One of the women, a member of the *Gidan Gunda* Multipurpose Cooperative in Chiromawa LGA, Kano State, established a sewing business for her daughter.⁶¹ Another established a motorbike taxi business for her son. Women members of this association benefitted from the association's oxen-driven plow, which was purchased with income from the group's sorghum farm. Now, the group leases the oxen to members at reduced cost. Women said they also contributed to their households by paying school fees, purchasing household necessities, and contributing to their children's weddings.

Figure 4: Change in Per Capital Income from Sales in Selected State and Value Chain (Naira)



Source: "MARKETS II Quarterly Progress Report January to March 2017," (selected data from Benue, Kano, Kaduna, and Ondo States).

Youth

MARKETS II activity reporting data is not disaggregated by age. The ET could not find relevant quantitative data from MARKETS II reports to support youth claims of increased incomes or productivity of cultivated acreage over the activity duration. Therefore, findings presented here are all from FGDs and KIIs.

Findings from FGDs with all youth farmer groups across the selected evaluation states showed that the adoption of new agricultural practices introduced by MARKETS II resulted in increased yields and income. This is corroborated by the MARKETS II Quarterly Report of January to March 2017, which shows that under the Feed the Future standard indicators "EG 3.2-17 [Feed the Future 4.5.2-

⁶⁰ FGD, Women Soybean Farmers, *Gidan Gunda* Multipurpose Cooperative, Kano State, September 5, 2017.

⁶¹ Ibid.

5]: Number of farmers and others who have applied new technologies or management practices because of USG assistance,” 324,223 farmers applied new technologies, 34 percent of which were young people; and of the 22,398 farmers who received short-term agricultural productivity training, 17 percent were youth. Young people also benefited from linkages with off-takers and made more income from their farming than they did before contact with the activity. For instance, a young male member of the *Dabu* Farmers Multipurpose Cooperative Society, Udei in LGA of Benue State,⁶² said that young people in the association recorded increased yields and income. He stated that he not only re-invested his profit in a larger acreage but was also able to build a house. His business network has grown beyond Benue State and he became an agent for LAMZI, a rice processor in Kano State.

Three young male rice farmers in Kano State said they re-invested their incomes from rain-fed rice to grow irrigated tomatoes in the dry season. This investment yielded an increase of 50 percent because of increased investments of funds earned from rice farming. Some of the young men of the *Bunkure Himma* Tomato Multipurpose Society in Bunkure LGA in Kano State became informal EAs in their communities⁶³ because they had been trained and had adopted new agricultural practices. Young women sorghum farmers at the *Baraya* Women’s Farmers Association in Bunkure LGA, also in Kano State, said members received loans to help expand their rice parboiling businesses.

In FGDs, youth farmers at the *Agevashi* Farmers’ Cooperative and at *Uchi* Beekeeper’s Multipurpose Cooperative in Tarkar LGA in Benue State said they could sell any quantity of soybean to Hule and Sons Ltd. (Hule and Sons) in Tarkar LGA.⁶⁴ They prefer Hule and Sons because they can sell their produce year-round and because the company weighs the produce and pays per kilogram or metric ton, which is accurate. On occasion, they need to sell on the open market because, when they only have small quantities to sell, transportation costs to the factory are prohibitive since the factory is not located in their community. However, MARKETS II could have facilitated the farmers to aggregate their produce to reach minimum volume for ease of transportation. In an interview, a Hule and Sons representative said they purchase soybean year-round in whatever quantity is supplied,⁶⁵ as does Mikap Nigeria Ltd. (Mikap), a rice processor in Makurdi, Benue State.⁶⁶ The company’s Managing Director said it buys good quality rice year-round from farmers in whatever quantity they have. Both processors explained that this continuous supply ensures they stay in business and allows for expansion.

Young women farmers at *Katsina* Women’s Farmers’ Cooperative Society in Kaduna State, and youth sorghum farmers at the *Gidan Gunda* Multipurpose Cooperative in Kano State, indicated that MARKETS II support has been beneficial. The sorghum farmers said that applying new farming practices led to an increase in their farm yields on every crop where they applied new agricultural practices. They could not quantify these increases in yield for non-sorghum products, but said they harvested more. They noted that new knowledge on how to store grains and prevent rat and insect infestation was useful not only for their sorghum, but also for their harvested, stored maize. As a result, they were able to store grains for longer and sell them when prices were higher.⁶⁷

Young women members at *Zama Lafiya Umman* Rice Cooperative, Kaduna State, said that they were primarily rice parboilers and had only small farms.⁶⁸ Once they finish processing rice from their own farms, they buy rice from other farmers to parboil. They also provide rice parboiling services to other rice farmers. The woman EA in Kano State, who worked in the rice value chain, explained that there were more elderly women than younger women in the associations who farmed rice. Young women were more concentrated at the processing end of rice parboiling. The ET noted that young

⁶² FGD, Men Rice Farmers, *Dabur* Farmers Multipurpose Cooperative, Benue State, September 2, 2017.

⁶³ FGD, Men Sorghum Farmers, *Bunkure Himma* Tomatoes Cooperative, Kano State, July 27, 2017.

⁶⁴ FGDs, Woman Youth Farmers, *Agevashi* Soya Bean Growers Cooperative and Youth Farmers, *Uchi* Beekeepers Cooperative, Benue State, August 31, 2017.

⁶⁵ KII, Processor (off-taker), Benue State, August 2, 2017.

⁶⁶ KII, Processor (off-taker), Benue State, August 3, 2017.

⁶⁷ FGDs, Young Women Farmers, *Katsina* I Multipurpose Women’s Cooperative, Kaduna State, September 8, 2017, and Young Women Farmers, *Gidan Gunda* Multipurpose Cooperative, Kano State, September 5, 2017.

⁶⁸ FGD, Young Women Rice Farmers, *Zaman lafiya Umma* Rice Cooperative, *Karafi Chirmomawa* LGA, Kano State, September 7, 2017.

women in rural communities rarely own their own farms and, instead, work on family farms.

Among youth farmers who do own farms, such as the men at *Udei Multipurpose Cooperative Society* in Benue State, the linkages to off-takers have been a tremendous success. However, not all farmers sell their products directly to off-takers.⁶⁹ Sometimes, young farmers sell products on the open market when the price is higher than that offered by off-takers. The EA in Ikara explained to the ET that he regularly compares prices between the open market and the off-takers.⁷⁰ When the open market price is higher, he advises beneficiary farmers to sell on the open market. Young women members of *Uchi Beekeeping Cooperative, Uchi, Tarka LGA, Benue State*, who attended the beekeeping training, said that they were trained and that they were lent all the necessary equipment and safety kits to start beekeeping. They said the cost was already paid off from the honey they produced.⁷¹ These start-up kits were not provided by MARKETS II activity staff, but by owners of a beekeeping business the activity supported to provide the training. MARKETS II decided the trainers—who also purchase honey—should provide training and MARKETS II paid for that training. The women said that everyone attending the training was eligible to receive in-kind loans of beekeeping equipment.

Youth farmers at the soybean sub-value chain in Benue State acquired additional income from beekeeping, which MARKETS II introduced to promote cross pollination. Women also said that they make a good profit from beekeeping. They based this on the increased number of beekeeping boxes and the honey produced. The MARKETS II activity director and household and economic strengthening advisor explained that the beekeeping and cocoa spray training interventions in soybean and cocoa farming were deliberate actions designed to reach more women and young people.⁷²

Soybean farmers learned new recipes while attending nutrition training organized by MARKETS II. Young women farmers in the *Uchi Beekeeping Cooperative* in Benue State said they made the new recipes a daily part of their family menu—especially the new recipes using soybean. However, most of the women interviewed did not receive nutrition training. The training was a one-off provided to women in the soybean sub-value chain.

CONCLUSIONS

Sufficient evidence from FGDs exists to indicate that MARKETS II has actively benefitted both women and young farmers. Interventions supporting women and young farmers concentrated on introducing novel agricultural practices and techniques for improving productivity. A significant number of these beneficiaries were happy with how their livelihoods improved after their involvement with MARKETS II.

Many participants noted that involvement with MARKETS II led to increased crop yields and noticeably increased household income. The extra funds were used to support other causes, including re-investment in activities for expansion purposes. In some instances, the activity provided incentives for women and young farmers to diversify from traditional crops like sorghum, rice, and soybean and cultivate crops like cocoa and engage in beekeeping and honey production. These developments clearly led to the more inclusive environment for women and young people envisioned by MARKETS II's revised implementation strategy. Because data was disaggregated by sex, income and productivity data captured by MARKETS II reports provided further evidence that women saw an increase in their incomes but the same analysis was not possible for young people.

Women benefited from advice on good hygiene, knowledge of recipe preparation to improve household diets, home gardening, and micro-enterprise training using the MARKETS II Microenterprise Fundamentals (MEF) course. The course included training on developing a microenterprise using the new recipes and was well received by the women farmers, IDPs, and micro and small-scale food processors who attended.

⁶⁹ FGD, Men Youth Farmers, *Dabur Farmers' Cooperative*, Udei, Guma LGA, Benue State, September 2, 2017.

⁷⁰ KII, Man Extension Agent, Ikara, Kaduna State, September 7, 2017.

⁷¹ FGD, Young Women Farmers, *Uchi Beekeepers Cooperative*, Benue State, August 31, 2017.

⁷² KII, MARKETS II Staff, Abuja, FCT, July 31, 2017.

RECOMMENDATIONS

Women

Future interventions should continue and expand capacity building initiatives for women. Training to strengthen associations and women's individual ability to record increases in yields and incomes, and to properly measure their acreage, should be included. To further empower women, simple tools could be provided to enable them to quantify yields and incomes, thus providing them a way to standardize produce. One such tool could be pictorial depiction of measures and their equivalence in metric measurements. Pictures should start at cups, then show basins and then show sacks. This way the women can do the addition and multiplication to determine how much they have harvested. Recording books for each year should also be provided so each woman can record her yield. For non-educated women, literate women or men could help fill in the record books. Their children and relatives could also assist. The activity has already used pictorial training manuals, which have been successful, so farmers would understand and use pictorial measurement guides and record books if they were taught how to use them during training sessions.

Future activities should consider focusing more attention on the commodities that have enabled women to have the highest productivity and income increases. For MARKETS II evaluation states, these were in soybean, maize, and rain-fed rice. However, such prioritization of value chains should also be state specific; for instance, in Kano State, sorghum had a higher prevalence than rain-fed rice, so sorghum would be prioritized. This would enable future activities to focus and develop women's businesses along the various points of the value chain; reach more women; and build stronger, more sustainable associations.

More women in mixed associations should be encouraged to show interest in linkages with off-takers. Women interviewed in Kaduna State could not provide the names of off-takers but said the chairman of the association had the details. They should also be encouraged and given incentives to take leadership roles within these associations. Incentives could be included in the activity design and could simply be awards for women like "businesswoman of the year," or any appropriate title.

Zonal baselines are needed to apply the Women's Empowerment in Agriculture Index (WEAI) and should be done for all target activity zones.⁷³ This would track changes in women's economic advancement and activity benefits in future agriculture interventions. It would also clarify understanding of what has been achieved and where more effort is needed.

Youth

The core of interventions for young people should be capacity building and an introduction to good agronomic practices. Young people, both women and men, should be encouraged to establish associations in all target states. The associations could be single-sex or co-ed, although single-sex is preferred. Women-only associations enable young women to build confidence as leaders and as businesswomen. Single-sex associations should be encouraged to use networking to leverage their strength. For instance, they could aggregate their farm produce as single-sex associations and sell it all to an off-taker. Furthermore, they could also aggregate their produce with other associations and have stronger bargaining power to get premium prices.

Future activities should disaggregate all data at all levels by sex and age. This would provide a clear picture of how the activity has impacted young people and how they have benefitted. While MARKETS II data captured the number of young women and men reached, the data failed to capture issues such as productivity and incomes by age. This would have been numerical evidence supporting young people's claims to have benefitted from MARKETS II in terms of increased productivity and income.

4.1.4 Were there any missed opportunities for incorporating women and/or youth into MARKETS II activities?

⁷³ WEAI is a survey-based index designed to measure the empowerment, agency, and inclusion of women in the agricultural sector.

FINDINGS

Women

Even though MARKETS II exceeded its target for women farmers (as stated in 4.1.1 above), evidence suggests that the activity could have reached more women. There were opportunities to reach more women and young people in terms of awareness and promotion of the activity's aims and objectives. (Specific recommendations to address some of the issues of supporting an inclusive activity approach are included in Section 4.1.1).

A common theme in all FGDs and interviews with women was that the activity missed an opportunity to reach more women along the various points of the value chain like processing. For instance, the women members of *Ohueze Multipurpose* and *Aretunmi Women Multipurpose Society*, Emure-ile, Owo, in Ondo State, said more women process cassava than farm cassava.⁷⁴ Similarly, in Kano, more young women are at the processing point of the rice value chain than the production point. Women fish farmers interviewed in Ondo State said all members of the Redeemer's Women's Fishery Cooperative process fish before selling it, and only a few are in production.

Another opportunity to reach more women was through hiring dedicated staff. During a KII, the institutional capacity building specialist of MARKETS II Benue State service provider, Egalf Nigeria Ltd. (Egalf), said the presence of dedicated women and youth staff at the state level, or in the office of service providers, would have enabled more women to participate.⁷⁵ She explained that the service provider Egalf had a gender specialist in 2013 who made sure that efforts were made to meet MARKETS II's minimum standard of equal representation. In 2015, an institutional capacity building specialist, whose scope of work did not include women and young people, replaced the gender specialist. She explained that this change meant that no staff member was specifically responsible for women and young people.⁷⁶ The head of household empowerment and strengthening pointed out that, even though MARKETS II met its targets for women and young people, an audit midway through the lifecycle could have identified which good practices should be scaled-up, which gaps should be addressed, and what potential actions should be taken to bridge those gaps.⁷⁷

Youth

MARKETS II achieved its target for young farmers, which was 30 percent of total beneficiaries. The ET learned that MARKETS II made efforts to engage young people at non-farming points in the value chains where the young people could see quicker returns, which contributed to their success in meeting their targets. Young people interviewed felt that several opportunities existed to reach more young people, especially if MARKETS II could have targeted them at processing points of the value chains instead of at the production point, which was not popular among them. For instance, young women and men are commonly found working at the processing points of the value chains (like in rice processing and as cocoa sprayers in the cocoa value chain).⁷⁸ These points provided opportunities for MARKETS II to reach more young people. Sub-activities in the cocoa value chain, which included training of cocoa sprayers, reached young men who were already beneficiaries or hired laborers of beneficiaries in the cocoa value chain, but did not attract new participants to MARKETS II. In an interview, the MARKETS II head of household empowerment and strengthening said that few young people are involved in agriculture at any value chain production point because they prefer quick returns on investments. Thus, there is a need to engage young people at value chain points where they can see quick returns. This is what informed the beekeeping and cocoa spraying intervention.⁷⁹

⁷⁴ FGD, Women Farmers, *Ohueze Multipurpose Cooperative* and *Aretunmi Women's Multipurpose*, Ondo State, September 4, 2017.

⁷⁵ KII, MARKETS II Service Providers, Benue State, August 5, 2017.

⁷⁶ Ibid.

⁷⁷ KII, MARKETS II Staff, FCT, July 31, 2017.

⁷⁸ FGD, Young Women Farmers, *Baraya Young Women's Cooperative* and *Bunkure Himma Tomatoes Cooperative*, Kano State, July 29, 2017.

⁷⁹ KII, MARKETS II Staff, Abuja, FCT, July 31, 2017.

CONCLUSIONS

During its lifecycle, MARKETS II exceeded its targets for reaching women and young people. The project did not miss any opportunities to leverage and reach targets for these groups. However, future interventions should note a few opportunities that MARKETS II did not explore fully and that might enable interventions reach more women and young people. Some of these were in planned activities such as the beekeeping and cocoa spraying interventions, which were meant for participating farmers. Such sub-activities provide opportunities to attract new participants, which future interventions could explore. Furthermore, a focus on various points of the value chain, especially processing (which was done in the aquaculture value chain), was a missed opportunity for the activity to reach more women and young people.

Future interventions could also plan for women and youth audits during the activity lifecycle. Audits would provide an opportunity for the activity to identify gaps to be bridged in order to ensure reaching more women and young people in all value chains. Additionally, the presence of a dedicated women and youth staff, or staff with responsibility for women and youth at state levels, would allow more women and youth to be reached.

RECOMMENDATIONS

Women

To ensure a meaningful, inclusive approach to farming, any future activity should offer opportunities for support in activities along existing value chains—from production to processing—and in identifying and supporting women to become involved in diversified activities like beekeeping. Careful consideration should be given to first determining the activities most likely to appeal to younger women to ensure an effective use of resources to reach targeted beneficiaries in a timely manner. In each state where future similar interventions like MARKETS II will be implemented, a dedicated women youth specialist staff (like the position at the national level) should be employed.

Youth

Social media should be used as a marketing tool to attract and develop young people's interest in farming. Successful young farmers should be the face of these campaigns. This should, however, be based on context and dependent on access to social media.

Activities should be included along the various value chains where young people are engaged, or where quick returns encourage their participation. These activities should be based on what young people do at various points of a value chain and aim to build their capacity to increase incomes even by doing the same work they were doing before the intervention.

Future interventions targeting young people must ensure that the majority of participants are locals, so the knowledge and skills acquired do not get lost when migrant laborers leave. Some of the young people trained as cocoa sprayers were migrant farmers, so knowledge could be lost to the community if they do not return from their homes. Substantial numbers of local young people in such trainings would ensure that sufficient knowledge and skills are available locally if migrant laborers are not available when needed. Furthermore, a dedicated youth staff member should be employed by service providers at the staff level to serve as a youth specialist.

4.1.5 Are there any successes from MARKETS II that can be adapted to specifically integrate women and/or youth?

FINDINGS

Women

The ET interviewed EAs and service providers who all felt that working with associations was a successful strategy for integrating women into the MARKETS II activity. This, coupled with having women EAs, women lead farmers, and women opinion leaders, provided a communication channel

for women farmers, particularly in Kano and Kaduna States.⁸⁰ Women in all FGDs also felt that EAs reaching them through the associations was a successful approach, because women members of associations were informed, and the ones left out chose not to respond to invitations to attend association meetings.⁸¹

Women farmers, EAs, and service providers identified capacity building as a major factor for encouraging use of new technologies and good practices. The use of farm calendars⁸² and demonstration farms during capacity building trainings reinforced learning of new practices and enabled new technologies and practices to be applied. Women farmers attributed higher produce yields to new technology application and good agricultural practices like spacing, planting seeds, harvesting and threshing, and burying fertilizer rather than spraying it. Women farmers in Ondo State who grew cocoa and cassava attributed higher yields to the use of new technologies and good agricultural practices introduced and taught by MARKETS II.⁸³ The techniques, which included regular farm brushing, pruning, drying cocoa seeds on raised platforms, and splitting off cocoa pods with sticks, were cited as the reason for higher grade produce. These new techniques and practices were a departure from the ones the women farmers had used before.⁸⁴ For instance, farmers did not prune their cocoa plantations prior to MARKETS II activities.⁸⁵ Using these techniques and practices resulted in increased cocoa yields and derived incomes from sales of cocoa. Women rice farmers in Benue and Kano States also pointed to new planting techniques—transplanting on straight lines with few rice stalks in one hole and using the drum to thresh instead beating harvested rice with sticks—as ones that produced better quality grains, and reduced breakage and wastage of rice.⁸⁶

Women respondents in Kano and Kaduna States said that eliminating the middleman through direct linkages to off-takers encouraged women to increase farm size and production. Direct links with off-takers meant that women were able to make a profit and get premium price added. The presence of a reliable buyer gave women confidence that their produce would be sold off regardless of quantity—as long as it met the off-takers requirement.⁸⁷ Women cocoa farmers tilled abandoned cocoa plantations using new agricultural practices to increase production. And, like the women rice growers in Kano State, direct linkages to off-takers meant they got more money for their produce. Furthermore, some associations have become strong enough to aggregate members' produce and sell to off-takers in bulk.⁸⁸ This has further motivated women farmers to increase their acreage. For example, women farmers at *Sumakaa* Youth Cooperative in Benue State no longer take their rice to the open market. They prefer to use the collective arrangement. Off-takers like Hule and Sons and Mikap in Benue State purchase grains by standard weight measures (kilograms), even in quantities as low as 20 kg.⁸⁹ This has been an incentive for women who can sell their produce in small quantities year-round. The ET interviewed women farmers in the *Agevashi* Cooperative and *Uchi* Beekeepers Cooperative in Benue State who explained that because off-takers buy small amounts, they sometimes approach them even when they only have low quantities of grain.⁹⁰

The rice off-taker, Umza International Farms, Ltd. (Umza), in Kano State explained that the rice supplied by MARKETS II farmers was of a higher quality and in high demand, so it could be packaged

⁸⁰ For example, KIs, Man and Woman Extension Agents, Kano State, July 2, 2017 and KII, Woman Extension Agent, Kaduna State, July 26, 2017.

⁸¹ FGDs, Women Farmers, *Ohueze* Multipurpose Cooperative, *Aretunmi* Women's Multipurpose, Ondo State, September 4, 2017, *Katsina* I Multipurpose Women's Cooperative, Kaduna State, September 8, 2017, *Gidan Gunda* Multipurpose Cooperative, Kano State, September 5, 2017 and *Zaman lafiya Umma* Rice Cooperative, *Karofi Chirmomawa* LGA, Kano State, September 7, 2017.

⁸² Farm calendars are pictorial training materials used for teaching new agronomic practices to farmers, which serve as a reference booklet for farmers post training.

⁸³ FGD, Women Cocoa Farmers, *Ifedayo Ala* and *Kajola Aponmu* Cooperative Societies, Ondo State, September 5, 2017.

⁸⁴ Ibid.

⁸⁵ KII, MARKETS II Service Provider, Ondo State, August 7, 2017.

⁸⁶ FGD, Women Farmers, *Katsina* I Multipurpose Women's Cooperative, Kaduna State, September 8, 2017, *Gidan Gunda* Multipurpose Cooperative, Kano State, September 5, 2017 and *Zumunchi* Multipurpose Cooperative, Kaduna State, September 9, 2017.

⁸⁷ FGDs, Women Cocoa Farmers, *Ifedayo Ala* and *Kajola Aponmu* Cooperative Societies, Ondo State, September 5, 2017.

⁸⁸ FGD, Women Farmers, *Zumunchi* Multipurpose Cooperative, Kaduna State, September 9, 2017.

⁸⁹ KIs, Processors (off-takers), Benue State, August 2 and August 3, 2017.

⁹⁰ FGD, Women Soybean Farmers, *Agevashi* Soya Bean Growers Cooperative, Benue State, August 31, 2017.

and sold at a higher price.⁹¹ Representatives of Mikap, a rice processor in Benue State, explained that the MARKETS II intervention and linkages with rice farmers saved the factory from collapse, because before intervention the Mikap rice was poor quality and unacceptable to customers.⁹² The quality came from farmers supplying mixed grains, which meant that rice from the same package had different cooking points. He also said that the rice they bought from the open market before MARKETS II had so many stones in it that the processing equipment constantly broke down.⁹³ With MARKETS II's interventions, processors no longer break down and Mikap rice has become a household name. The Manager of Hule and Sons, also in Benue State,⁹⁴ said that because of a steady supply of good quality soybean, the company is expanding its business beyond producing soybean cakes to include oil refining. He explained that good quality soybean, available year-round, allowed the factory to grow and increase its labor force by 100 percent.

MARKETS II's requirement of equal representation of women and men farmers as beneficiaries ensured that all partners deliberately identified women farmers to be a part of the activity. According to one activity manager,⁹⁵ the activity's Women and Vulnerable People's Integration Plan was a useful road map. The plan ensured that MARKETS II staff and all key stakeholders, remained conscious of making sure women were deliberately invited to the activity. Furthermore, women farmers pointed out that the provision of food and a transportation refund, as well as pictorial training by the service providers, encouraged members to participate in the activity.

Youth

Like the women, young farmers in all FGDs felt that capacity building and introduction of new agronomic practices and skills was fundamental to the increase in yields and income. They explained that applying these new practices led to increased yields. Young men farmers of the *Bunkure Himma* Tomato Multipurpose Society in Kano State, said that since becoming beneficiaries of MARKETS II, they witnessed an increase in yields of rice. Further, because of linkages to off-takers, this led to increased incomes.⁹⁶ They invested this additional income into their dry season tomato farms. The EAs and staff service providers who were interviewed said that training and capacity building were key to the success seen by activity beneficiary farmers who applied the new technologies. They explained that such farmers saw immediate and dramatic increases in harvest, which inspired other farmers to copy the new agronomic practices and ask for the seed variety.⁹⁷ One EA in Kano State said that the success of farmers applying new agronomic practices elicited demands by other farmers to become activity beneficiaries.⁹⁸

CONCLUSIONS

Core activities of MARKETS II—reaching women and young people through associations and including women EAs, capacity building with the use of farm calendars, and working with both women and mixed associations—were successful. Although nutrition was limited to women soybean farmers, it was also successful. If adapted in the future, these activities would enable women to integrate in interventions.

Beekeeping, though a secondary activity in the soybean sub-value chain, has the potential to support the integration of more women and young people into an activity. It will, however, require the opening of beekeeping to women and youth who are not beneficiary farmers.

Working with EAs through the associations ensured that groups of farmers were reached, not only individuals. This helped build social capital within the groups. Having extension officers to turn to for

⁹¹ KII, Processor (off-taker), Kano State, July 28, 2017.

⁹² KII, Processor (off-taker), Benue State, August 3, 2017.

⁹³ Ibid.

⁹⁴ KII, Processor (off-taker), Benue State, August 2, 2017.

⁹⁵ KII, MARKETS II Staff, Abuja, FCT, July 31, 2017.

⁹⁶ Ibid.

⁹⁷ FGD, Men Youth Farmers, *Bunkure Himma* Tomatoes Cooperative, Kano State, July 29, 2017.

⁹⁸ KII, Woman and Man Extension Agents, Kano State, July 28, 2017 and FGD, Woman Soybean Farmers, *Agevashi* Soya Bean Growers Cooperative, Benue State, August 31, 2017.

⁹⁹ KII, Woman Extension Agent, Kano State, July 28, 2017.

advice encouraged the farmers and helped increase their production.

MARKETS II's interventions and activities significantly contributed to enhancing the livelihoods of all players in the various agricultural value chains. Members of the close-knit rural farming communities the activity targeted are all investing, one way or another, in supporting each other in every step—from production to processing.

MARKETS II's capacity building, by introducing new technologies and good agricultural practices, yielded speedy results for women and young farmers and was key to their increased production yields and incomes. This was supported by strengthened associations that aggregate and sell in bulk—maximizing profits for women and young people.

Both the women integration plan and the youth integration plan served useful purposes, but both could have had greater impact if simplified step-by-step guides of the plan were available for service providers and EAs to use in the field.

RECOMMENDATIONS

Women

MARKETS II's targeting and including women in implementation design facilitated and ensured that women were actively involved in the program's activities. Achievements and practices in this regard should form an integral component of any future activity. Practices like mixed associations (with women and men members) always sending both a man and woman to each training, working with women EAs, and having women lead farmers and opinion leaders contributed to integrating women and should be taken forward. Future activities should adapt a focus-specific women integration plan with a simplified, step-by-step guide for service providers and EAs laying out how it should be implemented. Such a guide should be produced in the inception year of the activity and be available to all staff, partners, and beneficiaries. The content, especially the main thrust of such a plan, should be part of the capacity building training for beneficiaries. This will help the activity reach more women, because beneficiaries would be conscious that the activity wanted to reach women.

Other activities with the potential to attract women along the value chain and be a source of additional income should be identified and incorporated in future activity. MARKETS II did this with its beekeeping sub-activity in the soybean sub-value chain, which attracted beneficiary women farmers because of its potential for additional income and because it is less labor-intensive than farming. Beekeeping should be adapted to other value chains even where bees are not needed for pollination. Similarly, nutrition training and teaching new menus, which were also limited to the soybean sub-value chain, should be extended to other value chains. As in the case of beekeeping, nutrition has the potential to attract women and enable future activities to reach more women farmers. Teaching nutrition also has potential to increase women's income, as women in other value chains who sell cooked food could add the new recipes to their menus.

Training women on new farm skills, technologies, and use of farm calendars should be adopted in future interventions to enable training sessions to integrate more women farmers. Training and take-away farm calendars increase women's confidence and their ability to apply new technologies. They also enable them to share and teach new skills and technologies to other women. This contributes to the gradual change in communities' farming practices, which hopefully leads to increased yields and incomes for farmers.

Future interventions should also target women with broader training that would, in addition to teaching new agronomic practices, provide technical assistance like marketing skills and knowledge exchange tours to other corporate farms. Marketing could go beyond linkages to off-takers to include packaging and selling. For example, women's associations that produce rice could begin to process, package, and sell their rice at the local level as larger processors such as Mikap do.

Working with associations through EAs is an approach that should be integrated in future activities. The possibility of developing community EAs among women farmers should be also explored. Working through associations and EAs should not be the only approach to reaching women but

should be one of several approaches—as recommended in EQ 1, above.

Future interventions across all value chains should establish women’s associations, which should be strengthened to enable women to adopt more business-oriented approaches to farming. All members of such associations should be encouraged to be active and build social cohesion within the association and give each member a sense of belonging and ownership. Training should build women’s capacity and confidence to be leaders in their businesses. Linkages between women farmers and off-takers should be sustained and scaled-up as more women’s associations are established.

Youth

A youth integration plan, with a simplified step-by-step guide telling service providers and EAs how to implement the plan, should be integrated into future activities. The guide should be produced in the inception year of the activity and made available to all staff, partners, and beneficiaries. This would provide additional support for project implementers to reach young people.

Capacity building training in new agronomic practices, which was at the core of successes recorded by young farmers, should be integrated in future activities. Outstanding young women and men farmers should be nurtured to become EAs so that support services for young people in each target value chain will be readily available within the community. Such young EAs could start by simply being able to remind other young farmers what to do at different stages of the farming process. In addition, business training and grants to start agro-businesses should be given to dedicated young farmers who become EAs. Young EAs should be the face and role models of campaigns to attract young people to farming. However, changing their outlook earlier through education in elementary school by portraying jobs in agriculture positively may be more effective overall, especially if reading and math materials were oriented to rural and agricultural life. Encouraging children through school gardens and 4-H clubs is another possibility.

Young people can also be reached through associations and by encouraging establishment of young farmers’ associations, and this should be actively pursued. Where, for cultural reasons, women do not feel comfortable in mixed associations, women-only and men-only associations should be encouraged. These associations will enable young women to develop their leadership and business skills, but collaboration between young people’s associations should be encouraged. This collaboration might be a means of further integrating young people in the activity. It would also allow them to aggregate their produce and approach an off-taker from a place of greater strength. Single-sex associations themselves could be an attraction for young people to become interested in farming.

Cocoa spraying, which for health reasons related to the chemicals used, is regarded as a men-only activity, should be adapted for future activities in this value chain to further integrate young people in the activity. Because cocoa farmers pay for spraying services, it offers quick returns and would therefore be attractive to young men who can be hired to spray several farms. Such an activity should ensure that most of the young people trained are local residents and that migrant workers do not constitute the majority, since they will eventually leave, and the skills gained will be lost. Cocoa spraying training should be open to non-beneficiary farmers as well, in order to attract more young men to farming. Similarly, nutrition training should be extended to all young men and women farmers in other value chains, because good nutrition is valuable for all farmers. This will bring in additional income for beneficiary farmers and go beyond the soybean sub-value chain to attract more young women and men to other value chains.

4.2 EQ 2: PUBLIC-PRIVATE PARTNERSHIPS

MARKETS II PPPs are formalized partnerships between public institutions and private sector partners. They are designed to enhance sustainable agricultural development objectives—including increased productivity, improved business culture, and enhanced market opportunities. A passage from a review of the activity report stated the following:

“MARKETS II expands its impact and prospects for sustainability by supporting GoN

efforts to develop agricultural value chains pursuing PPPs with the GoN, state governments and the private sector stakeholders, developing beneficial sharing relations with other donor and private sector projects, subcontracting with local service providers, and undertaking robust capacity building activities.”⁹⁹

The PPP model designates allocation of tasks, obligations, and risks among public and private partners. The expected outcome is that the public and private sector entities will foster economic growth by continuing to work together after the activity has ended. As such, reporting data describes PPPs as essential elements of the activity’s exit strategy for ensuring sustainability of outcomes.

4.2.1 What results of MARKETS II can be attributed to its PPP model (differentiated by size—such as small sub-contractors, large sub-contractors, or government alliances)?

Private sector partners engaged in MARKETS II PPPs included farmer associations, processors (off-takers), inputs suppliers, seed companies, non-governmental organizations (NGOs), community-based organizations (CBOs), commercial banks, and MFBs. Public partners in the PPPs included FMARD, State ADPs, and government entities like research institutes, BoA, and NIRSAL. Table 6, below, shows that during the course of MARKETS II implementation, 169 PPPs were formed—exceeding the activity target of 164 by 3.5 percent.¹⁰⁰ However, only 122 PPPs were sustained, or 76.3 percent of the 160 target. The value of private sector investment as a result of the PPPs over the life of the activity was US\$27,220,324, which exceeded the target of US\$23,920 (113.8 percent). Likewise, public funds leveraged for agriculture and rural development through PPPs during the life of MARKETS II were US\$79,851,035 (224.3 percent), which exceeded the target of US\$35,600,000.¹⁰¹

Table 6: PPPs and Value of Private Sector Capital Investment (US\$)

Indicator	Life of Activity		
	TARGET	ACTUAL	Achieved (%)
No. of PPPs formed as a result of USG assistance	164	169	103.5%
No. of PPPs sustained as a result of Feed the Future assistance	160	122	76.3%
Value of new private sector investment in the agricultural sector leveraged by Feed the Future implementation [United States Dollars (USD)]	23,920,000	27,220,324	113.8%
Public funds leveraged for agriculture and rural development (USD)	35,600,000	79,851,035	224.3%

Source: “MARKETS II Quarterly Report January-March 2017,” Chemonics for USAID, April 28, 2017.

FINDINGS

According to MARKETS II activity reporting data, these PPPs consisted of 146 entities involved in agricultural production and were comprised mostly of processors (off-takers), surpassing the target of 136 (107.4 percent). Under partnerships with processing partners, partner companies purchased produce from MARKETS II farmers, effectively generating a market linkage. In addition, partners included 23 companies not involved in agricultural production like finance institutions, or 82 percent of the target of 28 these types of entities.¹⁰² MARKETS II PPPs are disaggregated below by type of private sector entity in Table 7.

⁹⁹ “MARKETS II Quarterly Report January-March 2017,” Chemonics for USAID, April 28, 2017.

¹⁰⁰ Ibid.

¹⁰¹ Ibid.

¹⁰² “MARKETS II Quarterly Report January-March 2017,” Chemonics for USAID, April 28, 2017.

Table 7: PPPs by Type

Private Sector Type	Life of Activity		
	TARGET	ACTUAL	Achieved (%)
Agricultural Production	136	146	107.4%
Other	28	23	82%
Total	164	169	103.1%

Source: List of Implementation Agreements Signed with USAID/MARKETS II: 2012 to 2017 from "MARKETS II Quarterly Report January-March 2017," Chemonics for USAID, April 28, 2017.

Linkages with Off-takers

Findings from KIIs with the PPP off-taker partners suggest that the partnerships, combined with MARKETS II-facilitated capacity building, contributed to positive changes in both quantity and quality of processed products. For example, in Kano State, Umza purchases harvested paddy rice from farmers under a MARKETS II PPP. During a KII at the company, officials described capacity-building activities Kano State Agricultural and Rural Development Authority (KNARDA) developed as helpful in facilitating beneficiary farmer groups to deliver clean products and increase the supply of paddy rice for processing.¹⁰³ Umza stated that MARKETS II farmers provide the processor with standardized paddy rice that is certified Grade A, which attracts a premium price.¹⁰⁴ This finding is further supported with monitoring data that shows the quantity of processed paddy by Umza increased by over 100 percent—from 30,000 MT to 70,000 MT over the period 2010 and 2016.¹⁰⁵ As a result, the processor introduced new product differentiation and market diversification activities. The partnership also helped create linkages with additional beneficiary farmers' groups, which further increased the volume of paddy supplied to the processor.¹⁰⁶ Similarly, during a KII in Benue State, the private sector processor (off-taker), Hule and Sons, described partnering with the Benue State Agricultural Development Authority (BNADP) under a PPP that created direct linkages to soybean farmers. These direct linkages resulted in an increased, continuous supply of good quality soybeans, which in turn contributed to continuous processing.¹⁰⁷ In Kaduna State, PPP processor partner Feedtek Limited (Feedtek) said that the partnership with the Kaduna Agricultural Development Project (KADP) increased visibility and exposed them to more farmer groups. This partnership also increased awareness of best technologies and good practices among farmers groups, which contributed to an increased volume of supplies linked to farmers' groups delivered.¹⁰⁸

Credit Availability

Findings from KII with MARKETS II's finance unit indicate that commercial lenders are less committed to agricultural lending, especially to smallholders. The major constraining factors are that these lenders have inadequate knowledge or training to identify and understand the business opportunities in agriculture. They also perceive agricultural lending as more risky than other sectors, such as manufacturing.¹⁰⁹

In response, at the inception stage of the activity, MARKETS II took some steps to facilitate farmers' access to commercial banks.¹¹⁰ This involved conducting a diagnostic test of 10 willing commercial banks to assess the prevailing structure of agricultural lending. The diagnostic survey identified the banks' poor knowledge of lending as a major constraint. This led MARKETS II to deliver training on general agriculture value chain financing (i.e., risk management, business opportunities, and customer service) to selected banks' agriculture desk officers. This initiative was not successful, and MARKETS

¹⁰³ KII, Processor (off-taker), July 28, 2017.

¹⁰⁴ Ibid.

¹⁰⁵ "MARKETS II Quarterly Progress Report October-December 2016," Chemonics for USAID, January 30, 2017.

¹⁰⁶ Ibid.

¹⁰⁷ KII, Processor (off-taker), Benue State, August 2, 2017.

¹⁰⁸ KII, Processor (off-taker), Kaduna State, July 26, 2017.

¹⁰⁹ KII, MARKETS II Staff, Abuja, August 2, 2017.

¹¹⁰ Ibid.

II tried de-risking loans by 50 percent, which was also not successful. In order to satisfy the Central Bank of Nigeria's operating mandate, lending by commercial banks continued to focus on other aspects of the value chain, such as processors and input supplies.

This situation led MARKETS II to change focus in 2016 towards micro-finance institutions (MFIs) and MFBs. For example, a KII with a representative of Microfinance Bank Plc. (Fortis MFB), indicated that the partnership under the new arrangement with Fortis MFB, established in 2016, successfully granted credit to smallholder farmers.¹¹¹ This partnership initially existed only in the FCT, Benue, and Niger but expanded to include MARKETS II beneficiaries in Kebbi and Sokoto States.¹¹² The relative success of the partnership with MFBs, where smallholder farmers accessed credit, is due to MFBs' comparative advantage of having adequate manpower, networking capabilities, and basic training in agriculture.

MARKETS II also provided re-training to the MFBs on tools for value financing, business skills using Nigerian Agriculture Enterprises Curriculum (NAEC), and group dynamics. For instance, trainings provided to Fortis MFB's agricultural loan officers taught approaches to agricultural lending and value chain finance and contributed to successful loans to smallholders.

Table 8: Fortis Microfinance Bank Credit Delivery

Indicator	2016	2017	Share (%)
Amount of Credit Disbursed (Million Naira)	4.3	12.0	279
Number of farmers groups accessing credit	6	10	167

Source: Fortis Microfinance Bank, Makurdi, Benue State, 2017.

Findings from a KII with a representative of Fortis MFB in Benue State showed that six farmers' groups accessed Naira 4.3 million in 2016 (Table 9). A year later, in 2017, the level of credit delivery increased by 279 percent to Naira 12 million and was accessed by 10 farmers' groups.¹¹³ Training delivered to farmers' groups helped them develop a savings culture, which contributed to a loan repayment rate of 95 percent.

In Ondo State, partnerships between the BoA, local farmers, and Matna Foods Ltd. (Matna Foods) did not work because Matna Foods failed to honor the off-taker agreement.¹¹⁴ The arrangement was that farmers produce according to specification, while BoA provided loans to farmers in the form of farm inputs. Matna Foods was to off-take the produced fresh cassava roots and pay an agreed upon price. In effect, due to an oversupply of cassava, Matna Foods refused to buy produce from local farmers at the pre-agreed price and, instead, sourced supplies elsewhere for less. As a result, BoA ended its lending activities under this particular PPP scheme.

Capacity Building

Findings from KIIs with the activity's private sector partners reveal that public-sector ADPs have value-added in reaching farmers through positive contributions to capacity-building on good agricultural practices. In Ondo State, private sector partners, including the Association of Fish Farmers and Aquaculture in Nigeria,¹¹⁵ Matna Foods,¹¹⁶ and Multi-Trex Integrated Foods Plc. (Multi-Trex)¹¹⁷ (in the aquaculture, cassava, and cocoa value chains, respectively), acknowledged the value-added partnership the Ondo State Agricultural Development Project (ODSADP) created by delivering capacity building services to farmers' organizations. In partnership with Matna and Multi-Trex, MARKETS II's trained the EAs to deliver capacity building services to farmers' organizations,

¹¹¹ KII, MFB Staff, Benue State, August 3, 2017.

¹¹² "MARKETS II Quarterly Progress Report January to March, 2017," Chemonics for USAID, April 28, 2017.

¹¹³ Ibid.

¹¹⁴ KII, ADP Staff, Ondo State, August 8, 2017.

¹¹⁵ KII, Processor (off-taker), August 7, 2017.

¹¹⁶ KII, Processor (off-taker), Ondo State, August 9, 2017.

¹¹⁷ KII, Processor (off-taker), Ondo State, August 7, 2017.

educate them on best practices, and create linkages between farmers' groups and off-takers.

KIIs held with the Manager of Feedtek, an off-taker for maize from Kaduna,¹¹⁸ Umza, a rice processor in Kano State,¹¹⁹ and Hule and Sons, a soybean processor from Benue State,¹²⁰ showed that the ADPs in Kaduna, Kano, and Benue States were responsible for providing training to farmers' organization and linking them with the off-takers. For instance, at Hule and Sons, capacity building created linkages with farmers and resulted in the processor accessing better quality products and an increased supply of soybeans from farmers. The quantity of processed soybeans increased steadily over the past three years, from 7,000 MT before MARKETS II to 9000 MT in 2014, 12,000 MT in 2015 and 14,000 MT in 2016.¹²¹ Also, according to the management staff of Umza, through good business skills and collaboration with MARKETS II, the rice processing company more than doubled its milling capacity from 30,000 MT to 70,000 MT since working with MARKETS projects in 2010.¹²² The private sector partners acknowledged that under the PPP initiative the ADPs made positive contributions to capacity building activities. The training in good agricultural practices, such as plant spacing, fertilizer application methods and timing, and post-harvest practices and storage resulted in positive changes in farmers' practices. These changes enhanced both the quality and the quantity of harvested outputs.¹²³

State ADPs played an essential role in providing capacity building services and linkages to the private sector, including KNARDA and BNADP. First, the ADPs have EAs with basic training in agriculture, which indirectly benefits the partnership by reduced training costs.¹²⁴ However, there are issues regarding how adequate the EAs employed by the ADPs are, especially in Benue and Kano States. In Benue State, retired EAs were re-engaged during MARKETS II implementation, while in Kano State, private EAs were engaged by service providers to deliver extension services to farmers' groups. EAs have the advantage of local knowledge of the farming communities, which enabled them to link the farmers' groups with the off-takers. The public-sector agencies have the potential to mobilize policy support from local leadership in the communities and the government.

CONCLUSIONS

Respective states' government agencies and ADPs, in partnership with their respective private sector organizations, performed their roles effectively during MARKETS II. ADPs had already trained EAs, which helped reduce costs and time. Furthermore, the EAs had local knowledge of the farming communities, which enabled them to effectively link farmers' groups with off-takers.

At the same time, the activity's PPP model was instrumental to the increased public-sector efficiency because the EAs performed their obligations. Training and a re-orientation on work ethics and the timeliness of activity delivery is critical here. The allowances and logistical support MARKETS II gave EAs provided them necessary incentives to deliver on their mandate during activity implementation.

The ET concluded that the PPP initiative had limited positive effects. For instance, there is a reasonable chance that some (or possibly all) PPPs created under the umbrella of MARKETS II, may not survive post-activity. The sustainability of the ADPs is questionable, largely because of the ongoing lack of central funding that allows them to operate effectively. Furthermore, the number of public EAs is insufficient to reach all farmers.

RECOMMENDATIONS

The introduction of PPPs in any future activities should establish a more robust *modus operandi* for all participating partners to accept and adhere to once the PPP becomes fully operational. Future interventions should deal directly with the private sector partners, where activities implemented by the ADPs could be funded by the private sector. Alternatively, the private sector may develop their

¹¹⁸ KII, Processor (off-taker), Kaduna State, July 26, 2017.

¹¹⁹ KII, Processor (off-taker), Kano State, July 28, 2017.

¹²⁰ KII, Processor (off-taker), Benue State, August 2, 2017.

¹²¹ Ibid.

¹²² "MARKETS II Quarterly Progress Report October to December 2016," Chemonics for USAID, January 30, 2017.

¹²³ Ibid.

¹²⁴ KIIs, ADP Staff, Kano State, July 28, 2017 and Benue State, August 1, 2017

extension system and provide necessary extension delivery services to farmers. The nature of the roles of partners under the PPPs should be defined at the activity design and formulation stage. The potential PPP key partners should be involved in discussions that include relevant financial institutions and a country's central bank so that their roles (policies and strategies) related to commercial bank lending and MFIs are clearer. Government departments and ministries that oversee rural agricultural development should also contribute to any activity formulation exercises. Finally, key representatives of the private sector in farming communities need to be involved in discussions, including bodies that represent producers and processors. This would allow the structure of potential PPP models to be better designed and ensure a higher probability of success.

The ET recommends that future interventions think of promoting rural saving schemes where money saved could be loaned to smallholder farmers. In addition, because banks are cautious of lending to smallholder farmers, future interventions considering PPPs should support farmers by providing inputs as a substitute to lending agents.

The ET also recommends that future interventions emphasize the importance of honoring partnership agreements.

A specific option to consider is creating Value Chain Innovation Platforms (VCIPs) with a mandate to facilitate interaction between actors in the value chain. This would foster improved business relations among the partners and might also support PPP activities. A VCIP is a group of individuals (who often represent organizations) with different backgrounds and interests, such as farmers' organizations, inputs suppliers, off-takers, government agencies like ADPs, and financial institutions. The members of the VCIP come together to diagnose problems, identify opportunities, and find ways to achieve goals. They may design and implement activities as a platform, or coordinate activities by individual members. In addition, the VCIP may form a policy lobby for governments to increase funding to government agency ADPs so they can perform their roles under the PPP. The VCIP can lobby governments at local, state, or federal levels to develop rural infrastructures, which is crucial for agricultural development and sustainability—especially in linkages of farmers' groups and the private sector.

4.2.2 What is the value-added of partnering rather than merely sub-contracting/grants?

FINDINGS

Findings from KIIs with MARKETS II activity private sector partners reveal that the value-added of partnering included capacity building, increased market opportunities for partners, and sustainability of activities. During one KII with Greenspore Agriculture Limited (Greenspore), a seed supplier in Kano State attested that a significant value-added of partnering is in capacity building.¹²⁵ In Nigeria, public extension service is generally weak and getting weaker. Partnerships fill the gap created by weak public extension services. Consequently, partnering has fostered an increased demand for extension service, improved seeds, and advisory services on good agricultural practices.

In Kano State, Umza said that capacity building is one of the value-added of partnering. Partnering has enhanced the capacity of both farmers and the private sector off-takers.¹²⁶ Smallholder farmers lack basic skills in best practices, so partnering has enhanced their capacity to produce high-quality paddy which, when processed by Umza, attracts high premium price. In addition, partnering contributed to improved quality and increased output of processed paddy. The quantity of paddy for processing has more than doubled, going from 30,000 MT in 2010 to 70,000 MT in 2016.¹²⁷ This value-added of partnering that resulted from capacity building was positively seen by Hule and Sons in Benue State. Partnering enhanced farmers' capacity to produce quality soybeans.¹²⁸ The processor benefits from the increased supply of quality soybean, which has sustained processing throughout the year. A KII with Matna Foods in Ondo State mentioned the value-added of capacity building from

¹²⁵ KII, Input Supplier, Kano State, July 28, 2017.

¹²⁶ KII, Processor (off-taker), Kano State on July 28, 2017.

¹²⁷ "MARKETS II Quarterly Progress Report October to December 2016," Chemonics for USAID, January 30, 2017.

¹²⁸ Ibid.

partnering rather than merely sub-contracting. It has built the capacity of the farmers to see farming as a business rather than just a livelihood. This has enhanced the quality of cassava and processed starch (the finished product).

KIIs held with Greenspore, Umza Farms, Hule and Sons, Mikap rice, and Cocoa Conservation Alliance in Ondo State, all indicated that partnering helped expand their market reach. Their involvement with MARKETS II created greater market opportunities outside the MARKETS II communities.¹²⁹ Similarly, Matna Foods stated there has been market expansion for supply of fresh cassava roots because farmers from other states—Kogi, Kwara, and Osun—are producing it as well. Consequently, there has been an increase of quantity of processed cassava.

Furthermore, according to Cocoa Conservation Alliance, partnering tends to create sustainability.¹³⁰ Since agriculture is a business, the private sector does it better. Thus, partnership helped Cocoa Conservation Alliance specialize.

CONCLUSIONS

The respective private sector partners all attested to the positive contribution or value-added of partnering rather than sub-contracting. The value-added are in the areas of capacity building of partners or actors in the value chains. This has enhanced the quality and quantity of farmers' supply and processed products. Partnering has also helped expand market opportunities for both farmers and other partners. Partnering tends to promote sustainability, as the private sector does it better and will likely continue because the financial benefits are good.

RECOMMENDATION

Partnerships should be sustained in future projects. However, they should consider dealing directly with the private sector to promote efficiency and enhance sustainability.

4.3 EQ 3: SUSTAINABILITY

Prior to answering the specific questions related to this overall question, it is useful to note that sustainability in development programs is quite simply determined by the extent to which beneficiaries and non-beneficiaries continue to receive benefits after the project ends. It is in this light that the ET considered the three sustainability-related sub-questions.

4.3.1 Did the MARKETS II approach/programming create any factors that (can) enshrine sustainable effects?

FINDINGS

Despite the value-added role that the ADPs played in facilitating partnerships with the private sector under the PPP initiative, there are concerns about sustainability of PPPs post-MARKETS II. During activity implementation, partnerships worked because the allowances and logistical support MARKETS II provided to the EAs strongly motivated them to perform their functions. This was mentioned during a KII with staff at BNADP in Benue State.¹³¹

The historical problem of inadequate funding of States' ADPs will affect their ability to deliver capacity building services and linkage of farmers' groups to the private sector without the mediating influence of MARKETS II.¹³² This affects especially rural communities, which are difficult to access because of poor road infrastructure. This constraint could hinder the long-term sustainability of PPPs in the absence of capacity building and successful linkages with farmers' groups.

For example, in Benue State, BNADP had to rely on retired staff to implement activities because the number of EAs employed was limited.¹³³ The employment of retired EAs was an effective strategy

¹²⁹ KII, Input Supplier, Kano State, July 28, 2018.

¹³⁰ KII, MARKETS II Service Provider, Ondo State, August 7, 2018.

¹³¹ KII, ADP Staff, Benue State, August 1, 2017.

¹³² KII, ADP Staff, Akure, Ondo State, August 7, 2017.

¹³³ KII, ADP Staff, Benue State, August 1, 2017.

during MARKETS II implementation but was not sustainable. In Ondo State, despite some success in capacity building delivered by the ADP, issues regarding farmers' access to inputs, especially fish feed (aquaculture), and access to off-takers and financial institutions, still need to be addressed.¹³⁴

The service providers testified that the approach used by MARKETS II enhanced sustainability of activity components, particularly the “lead farmer” approach and use of farmers' field day.¹³⁵ These findings from service providers are further substantiated by MARKETS II beneficiaries,¹³⁶ which suggests that prior to MARKETS II intervention beneficiary farmers lacked basic skills in good agricultural practices. The “lead farmer” title has also evolved, and they are now referred to as community-based facilitators.

CONCLUSIONS

The use of a lead farmer is an excellent approach to getting farmers to own the process. This approach was useful and, because the level of training the lead farmers provided to producers was good, and successes were visible; it changed farmers' attitude about seeking knowledge on their farms and their produce.

The MARKETS II activity's new technology and good practices capacity-building initiatives were delivered to service providers. In turn, they supervised the public-sector organization's extension services responsible for cascading trainings and extension services to the farmers. This intervention had a positive influence on performance.

RECOMMENDATIONS

USAID future programming should ensure that lead farmers and farmers' associations can function as trainers of trainers (ToT), as they will be the ones to replicate the technology transfer over time. This approach is likely to enshrine sustainability.

4.3.2 How did the organizational capacity-building work affect the sustainability of the partner organizations in PPPs?

FINDINGS

In the aquaculture value chain, a major threat to partnership sustainability was a recent change in government leadership, which created uncertainty regarding subsidizing fish fingerlings and feeds to farmers. Previously, Ondo State government, through the State Agricultural Inputs Supply Department, provided fish feed and other inputs to farmers at subsidized rates.¹³⁷ The process lasted only a few months before it was abolished because subsidizing fish fingerlings and feeds to farmers was not sustainable for the government.

MARKETS II administered an organizational capacity assessment on the service providers, which was used to develop plans to improve their service delivery to farmers. The service providers—DDI, SG2000, and Egalf—acknowledged that MARKETS II built their capacities in the following areas:¹³⁸

- Agronomic practices and transferring knowledge to farmers;
- Monitoring and evaluation (M&E) data gathering;
- Data collection tools and how to conduct surveys;
- Use of the global positioning system (GPS);
- Leadership and group dynamics which focus on how to form associations; and
- Packages of practices (PoPs) for agricultural extension.

Feedback from KIIs with the service providers indicated that the capacity building taught by MARKETS II exposed their staff to additional skills on how to support farmers. The specific practices

¹³⁴ KII, ADP Staff, Akure, Ondo State, August 7, 2017.

¹³⁵ A group-based learning process, often involves demonstration plot to showcase Good Agricultural Practices (GAP) as part of creating awareness to enhance adoption of GAP by farmers.

¹³⁶ FGDs, beneficiary farmers in all value chains across the four sampled States.

¹³⁷ Ibid.

¹³⁸ KIIs, DDI, SG 2000 and EGALF, Abuja, August 3, 2017.

or knowledge acquired included tips on plant spacing, line planting, fertilizer application methods and timing, weed control methods, harvesting practices, and post-harvest handling and storage.¹³⁹ This capacity building was mutually beneficial for farmers and private sector partners. For instance, Umza acknowledged that capacity building exposed its staff to good agricultural practices, which motivated the company to consider rice production.¹⁴⁰ However, according to farmers, there are some issues that remain in business trainings, recordkeeping, weak linkages with inputs suppliers and financial institutions, and, to some extent, with off-takers that need to be addressed.

The ADPs delivered ToT sessions on good practices that were well-designed and, in most cases, positively assessed by the farmers who felt they contributed to increased crop productivity. According to beneficiary MARKETS II farmers of cocoa,¹⁴¹ maize,¹⁴² rice,¹⁴³ and soybean,¹⁴⁴ over 90 percent of farmers thought training on new technologies significantly contributed to improving their farming performance. However, these training sessions occurred during the implementation of MARKETS II. Due to the public extension system's weak capacity it is unlikely that similar delivery and capacity building activities will be sustainable post-activity.¹⁴⁵

Under the PPPs, private sector partners such as Hule and Sons (Benue State), DA-All Green Seeds (Kaduna State), Greenspore (Kano State), and Conservation Alliance and Greater Glory hatchery (Ondo State), all acknowledged the contribution capacity building work played in delivery under the PPP arrangement. The work enhanced the partners' capacity to organize themselves to deliver trainings to lead farmers and other farmers. For instance, Conservation Alliance in Ondo State trained over 40,000 cocoa farmers.¹⁴⁶ In turn, these farmers are training other farmers within their associations. Similarly, as a result of capacity-building efforts, Hule and Sons nurtured four associations.¹⁴⁷ All of these private sector partners strongly indicated plans to continue capacity-building work to lead and other farmers. This suggests that these activities are sustainable.

The ET also found through KIs with Mikap rice processors,¹⁴⁸ Umza rice processors,¹⁴⁹ and Feedtek,¹⁵⁰ that under the PPP initiative, capacity-building activities facilitated farmers' access to output markets by linking beneficiary farmers' groups to off-takers. Off-takers bought harvested produce from the farmers for processing. Farmers benefited from readily available market outlets for their produce—saving them time searching for markets, helping them obtain premium prices for their produce, and, in some cases, enhancing their ability to access cash or in-kind credit from the off-takers. For instance, Hule and Sons purchases fertilizers and then provides them to farmers as credit to be repaid through buy-back of soybean. Similarly, Mikap rice processors grant loans to women rice farmers to be repaid through post-harvest paddy buy-back.

The private sector processors indicated that linkages with farmers positively enhanced their processing businesses. It guaranteed them supplies of high-quality produce attributed to MARKETS II training delivered to farmers. Training enhanced their ability to produce, harvest, and deliver good quality produce of uniform variety to processors.

In Benue State, Mikap rice processors acknowledged that capacity building exposed their role in the value chain and changed their approach to private sector interactions with farmers. Interaction is through direct purchase of paddy rice from farmers. In the last four years, the farmer capacity-building benefited Mikap and contributed to sustainable paddy rice processing. According to Mikap, before MARKETS II the processing factory almost closed down. Consumers were not buying the poor, mixed-quality grains that was Miva rice—the brand name of rice processed by Mikap.

¹³⁹ Ibid.

¹⁴⁰ KI, Processor (off-taker), Kano State, July 28, 2017.

¹⁴¹ FGD, Ifedayo-Ala Cocoa Cooperative Society, Ondo State, September 5, 2017.

¹⁴² FGD, Buda maikiyaya Maize Farmers, Kaduna State, September 8, 2017.

¹⁴³ FGD, Kaukai Rice Farmers Association, Kano State, September 7, 2017.

¹⁴⁴ FGD, Agashi Soybean Farmers Association, Benue State, September 1, 2017.

¹⁴⁵ KIs, ADP Staff in Benue, Kano, Kaduna and Ondo States, various dates.

¹⁴⁶ KI, Conservation Alliance, Akure, Ondo State, July 7, 2017.

¹⁴⁷ KI, Hule and Sons Limited, Benue State, August 2, 2017.

¹⁴⁸ KI, Mikap Rice Processor, Benue State, August 3, 2017.

¹⁴⁹ Ibid.

¹⁵⁰ Ibid.

Following the partnership between Mikap and BNADP under the PPP, the quality of paddy rice delivered by MARKETS II farmers improved to a standard uniform quality. The good quality rice is attributed to the improved varieties promoted and to capacity building delivered to farmers on good practices—especially post-harvest management practices. This contributed to a restoration of consumer confidence and an increased demand for Miva rice. In response to that increased demand, the processor increased processing capacity.

Text Box 1: Unexpected Outcome of MARKETS II Capacity Building

Trained MARKETS II Farmers Group in Kaduna State Contracted to Produce Maize for Processors: A significant unexpected outcome of capacity building activity occurred among maize farmers' group in Igabi, Kaduna State. A large company (*Babban Gona*) provided trained MARKETS II farmers with loans and inputs to produce maize and agreed to buy back the harvested produce. The guaranteed access to inputs and market outlets gave farmers incentives to expand maize production. Sixteen (16) farmers benefited from this strategy in 2017. By 2018, 300 farmers are targeted to benefit from the scheme.

Source: "MARKETS II Quarterly Report January-March 2017," Chemonics for USAID, April 28, 2017.

Similarly, Hule and Sons attested that soybean processing was uninterrupted all year because of the consistently good soybeans supply by MARKETS II-linked farmers. In addition to the regular supply of soybeans for processing, there was no breakdown of processing machinery—something that occurred in the past because of adulterated beans purchased from farmers. According to the processor, the outcome of the linkage with soybean farmers' groups, facilitated under the PPP, contributed to the consistent supply of clean beans and to the increased quantity of soybean processed over the past four years.

On the other hand, unlike training on new technologies and good practices, business management training was weak and lacking funding. The weak management training was largely influenced by the low level of education among the beneficiaries. This was evidenced by some farmers who cultivated the same size farmland between contact with MARKETS II and the end of the activity. This was seen in the sorghum farmers' group in Gigitar, and in rice farmers in *Kaukai* Farmers' Association, both in Kano State, and in the *Zumunta Saya Saya* Sorghum Farmers' Association in Ikara, Kaduna State.

Generally, in all the states the ET visited, there was limited access to credit through linkage to financial institutions. The exception was the farmers' group linked to Fortis MFB in Benue State. In some cases, like in Ondo State, even where there was linkage to credit institutions, the interest rate was high. This was the case with LAPO Microfinance Bank Ltd. (LAPO MFB), where the MFI has a very negative reputation with farmers.

The problem of aging and the limited number of EAs pose threats to sustainable extension delivery under the PPP. New or young farmers that might be engaged in farming lack knowledge and experience and need to be trained. This problem is prevalent in virtually all the states visited.

CONCLUSIONS

Capacity building activities conducted by public partner organizations in PPP during MARKETS II implementation was largely influenced by the allowances and logistical support. These provided good incentives and motivated EAs to deliver step-down trainings with positive impact on crop yields. However, evidence suggests that extension delivery and capacity building of activities to farmers' group given by the public entity will likely not continue post-MARKETS II. This lack of sustainability is due to the weak capacity of the public extension delivery system. Aging and inadequately trained extension staff within the public sector poses a serious threat to the sustainability of the PPP approach—both in terms of acquisition of farmer knowledge on new technologies and good agricultural practices.

RECOMMENDATIONS

To ensure quality delivery of extension services in targeted areas in any future activity design, PPPs should offer corporate partners a strong link back to producer organizations that they would not otherwise have. The PPP approach should aim to strengthen public sector engagement, whereby the private sector can fund public sector activities to deliver quality extension services. Also, there

should be high-level advocacy to both state and federal governments to increase funding to the ADPs, and to recruit and train young people to deliver extension services. This will enhance the capacity of the public-sector agency to deliver capacity building to more new and emerging young farmers over a longer period and lay the foundation for longer-term sustainability.

On a related note, off-takers' and producers' groups should be encouraged to invest in extension for in-demand commodities. This will complement extension services provided by the public sector and ensure a more sustainable and permanent solution. After the exit of the MARKETS II activity, off-takers have the potential to provide backstopping for beneficiary farmers and capacity building for emerging farmers. This is already being implemented by Tulip Cocoa Processing Ltd. in Ondo State. Hule and Sons in Benue State and Umza rice processors in Kano State have also expressed interest. By adopting this approach, there is a strong likelihood that business relations between farmers' organization and processors will be strong enough to continue post-MARKETS II.

4.3.3 To what extent are lasting results reaching the intended beneficiaries?

FINDINGS

This question has been partially answered through responses to previous questions, particularly Section 4.1.1. Elaborating further, findings from interviews with farmers' groups, which represented all value chains, show that farmers are adopting new technologies and practices, including plant spacing, fertilizer application, timing of fertilizer application, use of new inputs such as improved seeds, improved pest and disease management (including weeds), improved harvest/post-harvest handling (including processing), and improved storage. Adopting these new technologies and practices was a departure from the usual, more traditional, practices farmers had used—a departure largely influenced by the capacity building delivered to farmers. In addition, the farmers and off-takers (processors), who buy harvested crops from farmers, established linkages, which created market opportunities for farmers.

The change in farmers' practices enhanced the quality and quantity of crop outputs in all value chains. Findings from interviews with farmers in all seven value chains indicate that productivity after MARKETS II interventions increased. Qualitative information and indicative data provided by beneficiary farmers' groups and validated by MARKETS II monitoring data, show that productivity increased across the value chains. This is shown in Table 9.

Table 9: Farmer Productivity in Selected States by Value Chain (MT/HA)

State	Value Chain	Baseline (2012)	2014-2016 (Average)	% Change (2012 to 2016)
Benue	Soybean	1.08	1.38	28
	Rice (rain-fed)	2.61	4.47	71
Kaduna	Maize	1.36	4.30	216
	Sorghum	1.08	2.12	97
Kano	Rice (rain-fed)	2.61	6.73	158
	Sorghum	1.08	2.23	107
Ondo	Aquaculture	1.08	2.13	97
	Cassava	11.07	22.60	104
	Cocoa	0.40	0.60	51

Source: "MARKETS II Baseline survey reports," Chemonics for USAID, October 31, 2013 and "MARKETS II Quarterly Progress Report January to March 2017," (selected data from Benue, Kano, Kaduna, and Ondo States).

Increased productivity was highest for maize farmers. The proportion of increase rose by 216 percent, from an average of 1.36 MT/HA to an average of 4.30 MT/HA with MARKETS II intervention. This is followed by rice in Kano (158 percent), sorghum in Kano (107 percent), cassava (104 percent), sorghum in Kaduna (97 percent), rice in Benue (71 percent), cocoa in Ondo (51

percent), and soybean in Benue (28 percent).

With the significant yield increases, farmers produce surplus beyond what their families require for household consumption.¹⁵¹ Then they sell the excess either to linked off-takers or at local markets. Incomes derived from sales of produced crops increased in the range of 45 percent to 200 percent across all visited farmers' groups in the seven value chains. These include 45 percent to 150 percent increase among soybean farmers in the *Uchi* Beekeeping group,¹⁵² and 200 percent increase by *Dabu* Rice Farmers Cooperative in Benue State.¹⁵³ In Ondo State, income from sales increased by over 100 percent among *Ohueze Owo* cassava and *Ifedayo-Ala* Cocoa Cooperative Society,¹⁵⁴ and by 200 percent in *Ileolui Oreofe* Fish Association.¹⁵⁵ Similarly, in Kano State, sorghum farmers in *Gigitar*,¹⁵⁶ and *Kaukai* rice farmers saw income increases of approximately 100 percent and 200 percent, respectively. Also, earned income from sales of maize by farmers in Kaduna State increased by 200 percent.¹⁵⁷

Increased income was used to fund children's education, to buy staple foods such as sorghum and millet (as indicated by rice farmers' group in Minjibir, Kano State). This implies that rice was produced by the group largely for commercial purposes. However, a substantial proportion (62 percent) of the increased income was used for re-investment in farming, often to acquire more production land, to purchase additional inputs such as fertilizer, to pay for labor, or to purchase oxen and plows (Kano and Kaduna States). This extra money was also used to prepare land and hire services for other farmers in the community.

Increased income contributed to some smallholder farmers growing into large commercial farmers. For example, in *Zumunta Sayasaya* Farmers Cooperatives in Ikara LGA of Kaduna State, a soybean farmer who used to cultivate less than 1 HA of land expanded production of soybeans on to 5 HA of land.¹⁵⁸ Similarly, a maize farmer from Igabi in Ikara LGA of Kaduna State, who previously cultivated 0.5 HA of land, expanded to produce maize over 5 HA.¹⁵⁹ These observed changes are happening where the farmers' group received business training on good farming practices, linkages to output markets, and recordkeeping.

These positive changes are attributed to the farmers' involvement with the MARKETS II activity, which has enhanced their access to improved production technologies, practices, and trainings. Many of the linked MARKETS II farmers now see farming as a business, not just a livelihood. This concept is a major driver turning smallholder farmers into large commercial farmers, and it is likely that those businesses will survive and prosper post-MARKETS II.

Another case relates to Igabi community, where farmers purchase improved seeds of crop varieties from the EA. The EA purchases improved seeds from seed companies (Premier Seeds and Nagarta Seeds) in bulk and sells them to farmers. This creates a sustainable supply of seeds in the community. The EA also provides technical advice to the farmers, which helps increase demand for improved inputs. The EA noted that the MARKETS II activity enhanced his market reach for sales of improved seeds. He is currently operating in three LGAs—Kaduna North, Igabi, and Kaura. The impact of his expansion includes an enhanced income from sales of improved seeds and other inputs, the ability to employ three people to manage seed sales in other LGAs, and the opportunity to purchase a house and provide an education to his children—three of whom completed university.

KIIs with off-takers also showed that, at the processors level, farm-level changes in outputs created job opportunities because off-takers could employ more workers. For instance, Hule and Sons increased the number of employees by 100 percent as a result of its involvement with the MARKETS

¹⁵¹ FGD, *Kaukai* rice farmers in Kano State, September 7, 2017.

¹⁵² FGD, *Uchi* Beekeeping Soybean Farmers, Benue State, August 1, 2017.

¹⁵³ FGD, *Dabu* Rice Farmers, Benue State, August 2, 2017.

¹⁵⁴ FGD, *Ifedayo-Cocoa* Cooperative Society in Ondo State on September 5, 2017.

¹⁵⁵ FGD, *Ileolui-Oreofe* Fish Association in Ondo State on August 2, 2017.

¹⁵⁶ FGD, *Gigitar* Sorghum Farmers, Kano State on September 7, 2017.

¹⁵⁷ Ibid.

¹⁵⁸ FGD, *Zumunta Sayasaya* Farmers' Cooperative, Kaduna State, September 7, 2017.

¹⁵⁹ FGD, *Igabi* Maize Farmers' Association I, Kaduna State, September 8, 2017.

II beneficiary group farmers. Also, at the level of service providers, Cocoa Conservation Alliance recruited 26 new employees, including two PhDs, to deliver capacity building training to cocoa farmers in Ondo State.¹⁶⁰

Despite the positive contribution that adoption of new technologies and improved practices have made on increased productivity and incomes, in 20 out of the 33 farmers' groups said that there is still a problem with consistent supply of improved seeds, chemicals, and fertilizers. The groups facing these issues are located in relatively remote areas so sustainability of increased yields from crops is threatened if this situation is not adequately addressed. In most cases, these farmer groups plant harvested grains as seeds and have to travel long distances to access other inputs like fertilizers and chemicals—critical ingredients for productivity increases.

Aquaculture

The aquaculture value chain is relatively capital intensive and more technical than other value chains like cassava and maize. The Divine Fish Association farmers in Ondo State have applied the improved feeding regime for fingerlings, pond management, disease control, and management and value addition. These practices have enhanced aquaculture productivity by 97 percent and 145 percent by men and women farmers, respectively, as illustrated in Table 4. These changes in productivity enhanced farmers' incomes in the aquaculture value chains, as shown in Table 10, below.

Table 10: Gross Margin Profitability of Aquaculture in Ondo State (Naira/HA)

Value Chain	Baseline (2012)		Activity (2014 2016)		Change (%)	
	Men	Women	Men	Women	Men	Women
Aquaculture	3,176,035	2,906,391	8,903,904	5,708,560	180	96

Source: "MARKETS II Baseline Report," Chemonics for USAID, October 2013 and "MARKETS II Quarterly Progress Report January to March 2017," (selected data from Benue, Kano, Kaduna, and Ondo States).

Profits represented by the gross margin per HA showed that incomes derived by men and women farmers engaged in aquaculture in Ondo State increased by 180 percent and 96 percent, respectively.

Cassava

The average cassava yield in Ondo State increased between 2014 and 2016 by 104 percent and 76 percent for men and women farmers, respectively (see Table 4). The increases in yields are associated with the use of improved varieties and good agricultural practices, such as using the stem planting method, spacing, fertilizer application, weed management, and harvesting techniques. The ET also found out that new technology application and practices were influenced by the simplicity of the technologies and practices, affordability, and accessibility to smallholders. These factors encouraged use of improved stem cuttings and good practices, which have enhanced farmers' yields and increased their incomes, as shown in Table 11.

Table 11: Gross Margin Profitability of Cassava in Ondo State (Naira/HA)

Value Chain	Baseline (2012)		Activity (2014 2016)		Change (%)	
	Men	Women	Men	Women	Men	Women
Cassava	38,281	109,056	72,948	31,890	91	-71

Source: "MARKETS II Baseline Report," Chemonics for USAID, October 2013 and "MARKETS II Quarterly Progress Report January to March 2017," (selected data from Benue, Kano, Kaduna, and Ondo States).

However, women farmers' gross margin in cassava production declined by 71 percent from the baseline gross margin. This fall in gross margin may be due to the fact that most women in the cassava value chain prefer processing to production.

Cocoa

In the cocoa value chain, a critical factor influencing the market value of cocoa beans is bean quality.

¹⁶⁰ KII, Conservation Alliance, Ondo State, September 5, 2017.

The farmers from Kajola-Aponmu cocoa value chain acknowledged that using good agronomic practices increased the yield of cocoa beans by 51 percent and 84 percent among men and women cocoa farmers, respectively (Table 4). The increase in yields is associated with pruning, spacing of 3-meter (m) x 3m planting of cocoa seedlings, rehabilitation of old cocoa trees, and applying fertilizer to cocoa seedlings.

Feedback from cocoa farmers in Ifedayo-Ala cocoa farmer association indicate that farmers sell the cocoa beans to off-takers and earn profits from the increased productivity. This is corroborated by analysis of MARKETS II data presented in Table 12. The gross margin per HA for men and women farmers in the cocoa value chain increased by 189 percent and 82 percent, respectively.

Table 12: Gross Margin Profitability of Cocoa Production in Ondo State (Naira/HA)

Value Chain	Baseline (2012)		Activity (2014 2016)		Change (%)	
	Men	Women	Men	Women	Men	Women
Cocoa	59,232	53,722	171,322	97,743	189	82

Source: "MARKETS II Baseline Report," Chemonics for USAID, October 2013 and "MARKETS II Quarterly Progress Report January to March 2017," (selected data from Benue, Kano, Kaduna, and Ondo States).

Maize

The change in farmers' practices has also enhanced the quantity of maize outputs for all the farmers visited in the maize sub-value chain. Findings from maize farmers group in Kajuru, Kaduna State, indicated they have achieved huge increases in yields from maize after beginning to use the new technologies and good agronomic practices. These findings are validated by gross margin results presented in Table 13.

Table 13: Gross Margin Profitability of Maize Production in Kaduna State (Naira/HA)

Value Chain	Baseline (2012)		Activity (2014 2016)		Change (%)	
	Men	Women	Men	Women	Men	Women
Maize	36,222	41,351	190,264	172,045	425	316

Source: "MARKETS II Baseline Report," Chemonics for USAID, October 2013 and "MARKETS II Quarterly Progress Report January to March 2017," (selected data from Benue, Kano, Kaduna, and Ondo States).

As mentioned earlier, the levels of profitability have spurred smallholder farmers to re-invest a substantial proportion of their increased income in farming. This extra money was also used to prepare land and hire services for other farmers in the community, which then contributed to some smallholder farmers growing into large commercial farmers. However, farmers in the maize sub-value chain face constraints in labor availability—especially at planting and harvesting times.

Rice

The ET found that the specific practices or knowledge acquired had led farmers to change practices. For instance, among rice farmers in Minjibir in Kano State, productivity increased by 158 percent and 143 percent by men and women farmers, respectively (from 2.6 MT/HA and 2.8 MT/HA before MARKETS II—the baseline—to an average of 6.7 MT/HA and 6.9 MT/HA by men and women farmers, respectively over the past four years, as illustrated in Table 4.

The Akwete Rice Farmers' Association in Benue State noted that the promotion of improved rice varieties (FARO 44) and post-harvest handling and storage (among other good practices) strongly enhanced the quality of produced paddy, which is in high demand by off-takers.¹⁶¹ Other farmers in the rice value chains and rice off-takers in both Kano and Benue States have confirmed this finding.

The ET also found that farmers in the rice value chains in Benue and Kano States face labor constraints and expressed the need to have access to labor-saving technologies, such as Urea Super Granule applicators, reapers, and threshers. The Akwete Rice Farmers are willing to purchase them if they are linked with suppliers. They also want to be linked to financial institutions to fund their

¹⁶¹ FGD, Akwete Rice Farmers' Association, Benue State, September 2, 2017.

agricultural activities. Table 14 shows the gross margin profitability of rice production in Kano State (Naira/HA).

Table 14: Gross Margin Profitability of Rice Production in Kano State (Naira/HA)

Value Chain	Baseline (2012)		Activity (2014-2016)		Change (%)	
	Men	Women	Men	Women	Men	Women
Rice	96,324	101,521	371,492	382,023	286	276

Source: "MARKETS II Baseline Report," Chemonics for USAID, October 2013 and "MARKETS II Quarterly Progress Report January to March 2017," (selected data from Benue, Kano, Kaduna, and Ondo States).

Sorghum

Findings from interviews with farmers groups in the sorghum value chain reveal that farmers are adopting new technologies and practices. Successful new technologies and practices are generally simple, affordable, and accessible to smallholders. When they are, smallholders feel encouraged to use them, and that use results in productivity changes. Productivity levels from farmers in Kaduna increased by 97 percent and 160 percent among men and women farmers, respectively. Kano State saw improvements of 107 percent and 152 percent among men and women farmers, respectively (see Table 4). With significant increases in productivity, farmers produce surplus beyond what they need for household consumption, hence the excess was sold to linked off-takers, often in the local markets. Sorghum farmers in *Gitigar* in Kano State attested that average incomes from sorghum increased by approximately 100 percent. The ET validated this with analyzed data from MARKETS II, as presented in Table 15.

Table 15: Profitability of Sorghum Production in Kano State (Naira/HA)

Value Chain	Baseline (2012)		Activity (2014-2016)		Change (%)	
	Men	Women	Men	Women	Men	Women
Sorghum	26,816	22,920	71,563	77,113	167	236

Source: "MARKETS II Baseline Report," Chemonics for USAID, October 2013 and "MARKETS II Quarterly Progress Report January to March 2017," (selected data from Benue, Kano, Kaduna, and Ondo States).

In the past four years, sorghum profitability increased by 167 percent and 236 percent among men and women farmers, respectively, when compared with baseline gross margin.

Lack of access to both labor-saving technologies and credit facilities by *Kofar Kudu Arewa* sorghum farmers in Kano State limited production expansion.¹⁶² Findings from farmers in *Gitigar* Sorghum Farmers' Association in Kano State¹⁶³ indicated a number of constraints, including the fact that the variety of sorghum planted is long-duration and does not do well in areas bordering Sahel. They also face limited access to markets (off-takers did not buy the harvested sorghum); problems with access to fertilizer, which is only available in the open market at high prices; lack of access to labor-saving technologies; lack of training in business skills; and lack of access to credit institutions.

Soybean

Yield increase among farmers in the soybean sub-value chain is less marked than that of the other value chains, with increases at 28 percent and 62 percent by men and women farmers respectively (see Table 4). Over the past four years, yields increased from an average of 1.1 MT/HA (women) and 0.8 MT/HA (men) before MARKETS II to an average of 1.4 MT/HA. In the soybean sub-value chain, a significant factor that spurred increased production is the linkage to off-takers, which created a market outlet for farmers. Soybean, unlike rice, maize, and sorghum, which are food crops or staples, has limited demand among household consumers who often buy from the local markets. However, linkages with off-takers increased demand by industrial processors and created market access for farmers. This motivated farmers to grow the crop and, now, they are earning significant income from production. Soybean farmers in the *Uchi* beekeeping group had income increases

¹⁶² FGD, *Kofar Kudu Arewa Sorghum Farmers' Association*, Kano State, September 6, 2017.

¹⁶³ FGD, *Gitigar Sorghum Farmers*, Kano State, September 7, 2017.

ranging from 45 percent to 150 percent. Comparison of gross margins, as presented in Table 16, show that the average gross margin in production decreased by 14 percent among men farmers. However, profitability of production increased by 71 percent for the women farmers in the past four years, compared to baseline gross margin.

Table 16: Profitability of Soybean Production in Benue State (Naira/HA)

Value Chain	Baseline (2012)		Activity (2014-2016)		Change (%)	
	Men	Women	Men	Women	Men	Women
Soybean	37,881	32,605	32,573	55,654	-14	71

Source: "MARKETS II Baseline Report," Chemonics for USAID, October 2013 and "MARKETS II Quarterly Progress Report January to March 2017," (selected data from Benue, Kano, Kaduna, and Ondo States.)

Members of the *Agashi* Soybean Farmers Group in Benue State face a number of constraints. Improved soybean seed varieties are unavailable in the local markets (for instance, in 2017, the farmers received seeds from N2 Africa project); and there is heavy demand for labor at planting and harvesting times. Hence, the farmers expressed a need to have access to labor-saving technologies, such as planters and threshers.

CONCLUSIONS

The findings associated with this question show that the adoption of new technologies and practices was influenced by the simplicity of the technologies and practices, affordability, and accessibility to smallholders. These attributes of technologies and practices tend to support the potential for long-term sustainability. Once farmers had a good grasp of the information given to them through training and practice, they kept that information and continued to use it. This is the sustainable effect of knowledge transfer.

However, in the case of agricultural inputs like seeds, chemicals, and equipment, accessibility is crucial. Without access to these things, farmers are unlikely to improve productivity or crop yields, which restricts earning capability. If this situation is not addressed, sustainability of smallholder farms will be seriously impacted.

RECOMMENDATIONS

It is critical that intended beneficiaries have the means and capacity to develop and grow as a result of specific activity interventions. Because potential external factors influencing sustainability cannot be forecast in the scope of this evaluation, ET recommendations do not take them into account.

Clearly, capacity building initiatives through mediums like farmer associations, farmers' groups, and PPPs, which are aimed at supporting rural smallholder farmers (particularly women and young people), have largely been successful and should form an integral part of any future activity with similar aims and objectives.

In similar agriculture-related activities, access to new technologies is vital, especially access to seeds, which are crucial to sustainability. Similar programs should have outputs specifically targeting support for agro-dealer businesses within activity communities, especially in areas that are difficult to access. This will enhance the sustainable supply of improved inputs—including seeds.

In similar future activities, community seed production schemes should be incorporated into a specific activity output and strengthen farmers' capacity in techniques for quality seed production. Activities should also encourage ADPs to work with selected farmers and NGOs to develop on-farm, community-level seed production schemes. These will ensure a constant supply of good quality seeds. In cases where there are no entrepreneurial franchisers, or seed companies are unwilling to post representatives, the community seed production scheme can be a source of new seeds. In the long run, community seed producers can transform themselves into private seed enterprises or companies and provide seeds to area farming communities as an exit strategy [as in the case of Jirkur Seed Cooperative Society, which was strengthened by IITA's Promoting Sustainable Agriculture in Borno (PROSAB) project (2004-2009) now Jirkur Seed Company in Borno State]. Post-harvest and market opportunities created by the activity can maintain demand for increased farm products.

ET recommendations for specific value chains are as follows:

- The aquaculture value chain should be scaled up in future interventions, especially among young people because it is very profitable. Future intervention should promote rural saving schemes where money saved could be given out to farmers as loans.
- Future interventions in the cassava value chain should focus on adding value, especially at the household levels, which is particularly attractive to women farmers who prefer processing. Farmers groups can form associations and engage in commercially processing fresh cassava roots into a range of products, including high-quality cassava flour, cassava starch, and cassava chips. This will enhance their incomes and further drive production.
- Improved practices should be scaled up in future interventions in the cocoa value chain. Cocoa farmers should form associations to undertake the value addition of cocoa beans into a range of intermediate products such as cocoa butter, cocoa cake, and cocoa powder, which will enhance their incomes.
- Future interventions in the maize sub-value chain should focus on promoting labor-saving technologies like planters and threshers. Future interventions could link farmers' groups with service providers and suppliers of these technologies, so farmers' groups can access the machinery through hire-purchase or loans.
- Future interventions should focus on quality improvement, specifically in terms of variety and post-harvest processing and handling. This will enhance the quality of paddy rice. Linkages to off-takers should be up-scaled to create increased market opportunities for farmers to sell their rice.
- Future interventions in the soybean sub-value chain should focus on quality improvement like using varieties that yield high protein content and, better post-harvest processing and handling.
- Future interventions in the sorghum value chain should promote or focus on labor-saving technologies for planting, weed management, and harvesting. Farmers' groups or associations should be linked with suppliers who can provide labor-saving technologies.

4.3.4 What evidence indicates that non-beneficiary farmers have adopted technologies and practices promoted by MARKETS II?

FINDINGS

Cocoa

In the cocoa value chain, eight non-beneficiary cocoa farmers in Ifedayo-Ala in Akure North LGA of Ondo State, adopted good agronomic practices, especially pruning, spacing cocoa seedlings 3m x 3m when planting, rehabilitating old cocoa trees, and applying fertilizer to cocoa seedlings. The source of adoption was informal information sharing between non-beneficiaries and the Secretary of the *Ifedayo-Ala Cocoa Cooperative Society*, who was already providing free extension services to fellow cocoa farmers.

Maize

Findings from KII in Buda in Kajuru LGA of Kaduna State showed that a young non-beneficiary farmer (28 years old) adopted improved varieties of maize and good agricultural practices like plant spacing, line planting, and fertilizer application. The adoption was influenced by step-down trainings delivered by the lead farmer to members of the farmers' group. The training was conducted in the center of the community and was open to anyone who wanted to attend. Besides his observation of the training, the young man was impressed by the way maize performed on MARKETS II beneficiary farmers' farms. This young farmer mentioned that there are over 100 non-beneficiaries in the community who adopted the new technologies and good practices.¹⁶⁴

Sorghum

Similarly, in the sorghum value chain in Kano State, a KII was held with two young, non-beneficiary

¹⁶⁴ The ET could not interact with all of the over 100 non-beneficiary adopters due to time constraints.

farmers who adopted MARKETS II practices. They observed the beneficiary group farmers becoming successful on their sorghum farms, so adopted the practices themselves and, as a result, they achieved a 50 percent increase in sorghum yields.

Soybean

The ET also held two FGDs in Kaduna State with 10 and 12 non-beneficiary soybean farmers in *Ungwan Tanko* and *Sayasaya*, respectively. These non-beneficiaries often sourced improved seeds through grain exchanges with beneficiary farmers. They began planting improved soybean varieties and took on good practices. The information on new varieties and practices came from farmer-to-farmer information sharing between beneficiary group farmers and non-beneficiaries. Soybeans performed so well on beneficiary group farmers' fields, that non-beneficiaries were convinced that the technologies and good practices were effective, which enhanced adoption. Their average soybean yields increased by 40 percent (from 800 kg/HA prior to adoption to 1,120 kg/HA after adoption).

Rice

At Udei in Guma LGA of Benue State, the ET interacted with two non-beneficiary farmers who acted on behalf of 15 other non-beneficiary adopters in rice production. The non-beneficiaries adopted the use of Urea Super Granule fertilizer and chemicals, transplanting of rice seedlings, and use of improved seeds (FARO 44). The source of the new information was beneficiary group farmers in the community. The non-beneficiaries observed that MARKETS II beneficiary group farmers were achieving huge paddy yields and earning good profits. Seeing these concrete results influenced their adoption. Even though this was only the first year of adoption, one farmer doubled his land area under rice cultivation.

Finding from field visits showed that young people made up around 75 percent of non-beneficiaries who adopted new technologies and good agricultural practices promoted by MARKETS II. This was the case among cocoa farmers in Ondo State, sorghum farmers in Kano State, soybean farmers in Benue State, and maize farmers in Kaduna State.

CONCLUSIONS

MARKETS II has promoted many new technologies and practices, which have been partially adopted by non-beneficiary group farmers. MARKETS II-supported farmers introduced the new agricultural practices and methods of production and processing into their communities. Non-beneficiaries were primarily encouraged to observe others using the new practices in order to later adopt new technologies and practices to improve their own operations and crop yield outputs.

RECOMMENDATIONS

New technologies and good practices promotion should be scaled up in future programs to capture more non-beneficiaries. This will increase adoption of the whole range of MARKETS II-promoted technologies and practices. It will also increase the likelihood of long-term sustainability in rural communities. Farmers with some level of formal education—especially young people—should be identified and trained as master trainers to provide training to other farmers or farmer groups.

4.4 EQ 4: RELEVANCE

4.4.1 To what extent is MARKETS II relevant to the problem it aimed to address?

FINDINGS

In overall terms, the ET observed that the approach MARKETS II adopted has partially contributed to the solutions for low production, weak business culture, and lack of markets.

Low productivity

MARKETS II has contributed strongly to solving the problem of low productivity in all value chains. There is evidence of productivity increases across all seven value chains as presented in Table 4 and

Table 9. The introduction of new technologies and the training on good practices that are simple, affordable, and accessible, has enhanced smallholder farmers' knowledge and influenced farmer-to-farmer sharing of information. In turn, this sharing has contributed to scaling-out and to enhancing adoption among non-beneficiary farmers. Farmers see quick results in crop performance and in increased harvest yield, and this builds confidence in the value of farming as a business—one with the potential to lead to long-term sustainability. Informants mentioned that the information on measuring farmer yields and incomes that was included in the farmer production training PoPs was critical. This included training on recordkeeping, measuring farm size, and determining costs, revenues, and income, which are crucial to facilitating investment decisions.

Limited agricultural markets

The total value and volume of incremental sales attributed to MARKETS II activity (a proxy for access to markets) show that total incremental sales increased by 248 percent over the life of the project (Table 17).¹⁶⁵ During the same period, the volume of sales increased by 379 percent. However, findings from interviews show that the problem of lack of access to markets has only been partially addressed. MARKETS II contributed to enhanced market opportunities for 17 out of the 33 (52 percent) farmers' groups—including women and youth.¹⁶⁶ These are farmers who were readily able to sell harvested outputs to the linked off-takers (processors). These farmers are either geographically close to the processors or have access to good roads all year round, and this facilitates sales. The 48 percent of the sampled farmers' groups who have limited access or no access to off-takers are relatively remotely located, with poor road accessibility. This, among other factors, limits the scale of operation by the farmers.

Table 17: Total Value and Volume of Incremental Sales Attributed to MARKETS II

Indicator	2013	2014	2015	2016	2017	Growth (%)
Total Incremental Sales (US\$)	35,000,000	115,000,000	106,085,523	169,345,363	121,723,616	248
Total Volume of Sales (MT)	133,952	348,748	782,910	935,444	642,006	379
Number of Beneficiaries	58,910	107,751	157,400	169,794	197,160	235

Source: "MARKETS II Quarterly Report January to March 2017," Chemonics for USAID, April 28, 2017.

Lack of access to credit is a widespread issue among all farmers' groups, including women and youth. Thirty-one (31) of the 33 farmers' groups, or 94 percent, indicated a lack of access to credit facilities. Credit availability facilitates purchase of needed inputs and payment for activities across the entire agriculture production chain, rendering it pivotal in farming—especially for commercial purposes.

Weak Agricultural Business Culture

The ET's observation is that the approach adopted by MARKETS II has partially contributed to a solution for identified problems of weak agricultural business culture and limited markets. Increased income from sales of harvested produce across all the farmers groups (62 percent) was used for re-investment in farming, often to acquire more production land, purchase additional inputs such as fertilizer, pay for labor, or purchase oxen and plows (Kano and Kaduna States).¹⁶⁷ This extra money was also used to prepare land and hire services.

Increased income has allowed some smallholder farmers to grow into large commercial farmers. For

¹⁶⁵ The value of incremental sales indicates the value of the total amount agricultural products sold by farm households relative to a base year and can be calculated based on the total quantity sold of a crop times the crop price.

¹⁶⁶ ET's analysis of FGDs with all the 33 beneficiary groups.

¹⁶⁷ Ibid.

example, in *Zumunta Sayasaya* Farmers Cooperatives in Ikara LGA of Kaduna State, a soybean farmer who used to cultivate less than 1 HA of land expanded production of soybeans on to 5 HA of land. Similarly, a maize farmer in Igabi in Ikara LGA of Kaduna State who previously cultivated 0.5 HA of land expanded to produce maize over 5 HA. These observed changes are happening where the farmers' group have received business training on good farming practices, linkages to output markets, and recordkeeping.

On the other hand, some farmers have yet to embrace the value of investing in the agricultural sector as a profitable business as evidenced by lack of expansion in their cultivated farmland sizes. This was seen in the sorghum farmers' group in Gigitar, and in rice farmers in Kaukai Farmers' Association both in Kano State, and in the *Zumunta Suya* Sorghum Farmers' Cooperative in Ikara, Kaduna State.

CONCLUSIONS

As noted throughout this report, issues remain. More action aimed at improving livelihoods of women and young farmers is needed, as are improvements to effective functioning of PPPs—especially related to access to finance. Further steps are needed to enable service providers to become more professional and serve their clients better. However, MARKETS II has been instrumental in helping lay foundations for future activities. There appears little doubt that without MARKETS II's interventions supporting targeted beneficiaries, the livelihoods of smallholder farmers in the selected areas would, in all probability, not have progressed or developed to the same extent—if at all.

MARKETS II has meaningfully contributed to increased productivity in all value chains and has helped overcome the problem of low productivity. In all the sampled farmers groups, including women and youth, respondents acknowledged that productivity had significantly increased at various levels. In particular, the information on farmer yields and incomes that MARKETS II provided through the farmer production training PoPs—which included training on recordkeeping, measuring farm size, and determining costs, revenues, and income—was crucial for informing investment decisions.

With increased productivity, the prospect of higher household income through sales of in-demand produce also increased. In turn, this contributed significantly to MARKETS II's overriding objective—increase rural incomes in supported areas. Both the analyzed quantitative data and feedback given by participants in the FGDs held in the four states, show clear evidence that beneficiaries have used additional income for both family-related purposes and, in some cases, to develop their businesses.

RECOMMENDATIONS

As mentioned throughout this report, the proof of successful activity-implemented actions and/or initiatives is in the extent to which the results remain active in the future. In the design phase of future activities, clear targets and indicators should be established to help guide program decision-making and illustrate lessons learned. In particular and, with a focus on sustainability, new activities should concern themselves with these issues:

- Is there a continuation of activity goods and services delivery once the activity ends?
- Have changes been stimulated or caused during or after the activity?
- Are there new initiatives that stemmed from the activity, either during implementation or after?

Addressing these issues at the design stage increases the probability of intended results continuing post-activity. Specifically, capacity building measures aimed at supporting key players in agriculture value chains are vital to improvements in business performance. This includes ensuring both public and private sector players interact for the common good—weaknesses in any one sector's activities will negatively impact the other. The overall aim of these partnerships should be to improve the livelihoods of poor rural farmers and their communities. This can only be achieved when direct and indirect beneficiaries embrace the need for change. Therefore, considering ways to involve poor farmers is highly recommended during development of an implementation strategy for future activities.

The ET recommends that future interventions in capacity building should pay greater attention to improvements in cultivating and demonstrating the business aspects of agriculture. This was found to be a relatively weak area compared to capacity building on new technologies and good agricultural practices. Thus, future interventions should focus on private sector development, which should consider off-takers dealing directly with farmers. This implies that the private sector off-takers should develop their extension delivery system and offer extension services directly to farmers. An alternative is modifying the existing PPP so, if they wish, private sector off-takers could fund extension service delivery by the public-sector ADPs. The approach, especially dealing directly with the private sector, may be more sustainable than the current PPP structure involving the public-sector ADPs, which are constrained by inadequate extension staff and the problem of funding.

ANNEXES

ANNEX A: EXPRESSION OF INTEREST

PEEL TASK ORDER

EXPRESSION OF INTEREST – PERFORMANCE EVALUATION

I. BACKGROUND INFORMATION

A) Identifying Information

1. Project/Activity Title: Maximizing Agricultural Revenue and Key Enterprises in Targeted Sites (MARKETS II)
2. Award Number: AID-620-C-12-00001
3. Life of Period/Activity: April 18, 2012 – April 16, 2017 Stirred
4. Project/Activity Funding: \$60,732,079
5. Implementing Organization(s): CHEMONICS
6. International and Other Sub-Contractors/Sub Grantees
7. Project/Activity COR/AOR: Dr. Melanie Edward

B) Development Context

1. Problem or Opportunity Addressed by the Project/Activity Being Evaluated

Outline the specific problem or opportunity the project was designed to address. Describe why the project was initiated. Identify any unique circumstances that prevailed in the context at the time the project was designed.

Despite its abundant natural resources and oil wealth, approximately 70% of Nigeria's 140 million people live in poverty. Most rural Nigerian families work in the agricultural sector on a small scale. Key challenges for these types of families include limited access to: credit, inputs, knowledge, markets, and social services. Malnutrition is high in many parts of rural Nigeria and infectious disease – including malaria and AIDS – is a major problem. While women undertake much of a household's work, including in agriculture, their status is often low; women generally have even worse access to social services, including to health care. The agricultural sector has real potential to drive growth, employment and incomes. However, in many ways, the competitiveness of this sector is constrained by low investment, inadequate infrastructure, underdeveloped agribusiness practices and pro-market regulatory reform.

The Government of Nigeria (GON), African Union's New Partnership for Africa's Development (AU/NEPAD), **Economic Community of West African States (ECOWAS)** and representatives of the private sector, civil society and development partners signed Nigeria's Comprehensive Africa Agricultural Development Program (CAADP) Compact on October 30, 2009. The goal of the program is to help African countries reach and sustain a higher path of economic growth through agriculture-led development that reduces hunger and poverty, enables food and nutrition security and growth in exports.

Since 2000, USAID/Nigeria has significantly increased its Development Assistance to support the GON's efforts to address the country's poverty and food security concerns through investments in agricultural sector development. With development assistance resources and under various USG initiatives such as the Initiative to End Hunger in Africa (IEHA), the 2009 Global Food Security Response (GFSR) and Feed the Future (FTF), USAID/Nigeria has supported a range of interventions and programs. MARKETS II is a flagship Feed the Future initiative being implemented to response to these challenges.

2. Target Areas and Groups

Targets 14 States namely Kebbi, Sokoto, Kano, Kaduna, Sokoto, Jigawa, Kwara, Benue, Niger, Benue, Anambra, Ebonyi, Oyo, Lagos, and the Federal Capital Territory (FCT) – assists over 800,000 smallholder farmers increase yields through on-farm technology, access to inputs and markets along

commodity value chains (rice, cassava, sorghum, cocoa, aquaculture maize and soybean). Develop over 30, 000 producers' capacity and strengthen local organizations and associations

Include a map as applicable.

MARKETS' II Target States and the Value Chains

Targeted States: Kebbi, Sokoto, Kano, Kaduna, Sokoto, Jigawa, Kwara, Benue, Niger, Benue Anambra, Ebonyi, Oyo, Lagos, and FCT.

PIND states: Delta, Rivers, Bayelsa, Edo, Ondo, and Cross River states.

C) Intended Results of the Project/Activity Being Evaluated

Describe the problem the intervention is aiming to solve. Explain the development hypothesis, i.e., how specific intervention(s) are expected to lead to intended result(s). This can be in the form of a narrative "if-then" statement and include the results framework and logical framework. As applicable, describe the initial development hypothesis and any significant modifications.

USAID Nigeria's Economic Growth and Environment (EGE) Office has been implementing the Feed the Future (FTF) Presidential initiative since 2012 and through it supports Nigeria's agricultural development. Nigeria is a Feed the Future aligned country and investments of USG resources in agriculture contribute to the FTF goals of inclusive agriculture growth, poverty reduction, and improved nutritional status. MARKETS II is flagship activity contributing to the FTF goals of inclusive agriculture growth, poverty reduction, and improved nutritional status and as well as the EGE objective of "Broadened and Inclusive Growth" under the Mission's recently approved Country Development Cooperation Strategy (CDCS). The CDCS follows USAID Nigeria strategy 2010 – 2013.

At the design of MARKETS II, USAID/Nigeria identified low productivity, a weak business culture, and lack of market opportunities as the three most important constraints to the revitalization of the agricultural sector. MARKETS II is a demand-driven, private-sector led value chain approach, working from agro-processors and markets back to smallholder producers cultivating one to five hectares of land. The project promotes and facilitates country-led agricultural development, interfacing regularly with many diverse stakeholders and beneficiaries, including the Federal Ministry of Agriculture and Rural Development (FMARD). FMARD is responsible for Agriculture development and transformation and the current focus is to promote agriculture as a business, integrate the agricultural value chain, and make agriculture a key driver of Nigeria's economic growth.

Figure 1: Feed the Future Results Framework (2012–2016)

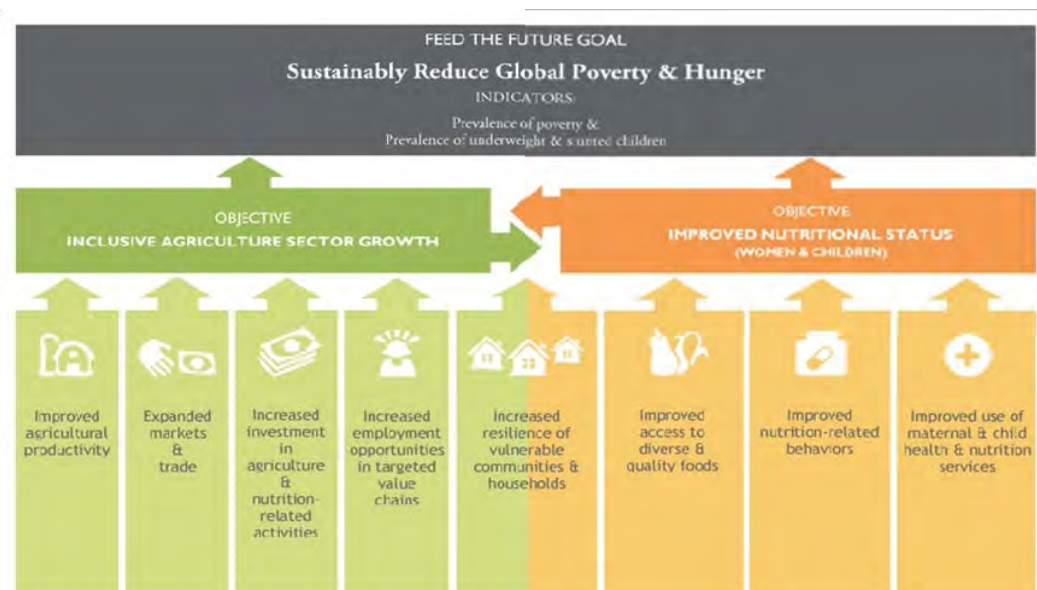


Figure 2: USAID/Nigeria Economic Growth Results Framework (2010 – 2013)

AO 2: Increased Rural Incomes and Jobs in Assisted Areas • Agricultural revenues generated • New agriculture value chain jobs created			
IR 1: Increased Agro-enterprise-farmer linkages		IR 2: Reduced infrastructure (energy, trade and transport) bottlenecks	IR 3: Improved agricultural and trade enabling environment at state and federal levels
Sub-IR 1: Increased agricultural productivity	Sub-IR 2: Increased value of private sector input supply to and output purchases from farmers		

Figure 3: USAID/Nigeria Economic Growth Results Framework (2015 – 2019 CDCS)

A. MARKETS II Development Hypothesis

As the flagship project of USAID Nigeria's Feed the Future Program, MARETS II has been designed under USAID/Nigeria's strategy 2010 – 2013 to contribute to increased rural incomes in selected areas and support the U.S. Government's Feed the Future (FTF) initiative. During the implementation, USAID signed a Memorandum of Understanding with the Chevron-funded Foundation for Partnership Initiatives in the Niger Delta (PIND) to increase agriculture-related incomes, increase agro-enterprise-farm linkages, and increase participation in commercial agricultural markets by the very poor in the Niger Delta. MARKETS II will work in close collaboration with PIND on their economic development activities in the Niger Delta region.

The development hypothesis put forward by the MARKETS project is derived from USAID/Nigeria Economic Growth Team Development Hypothesis stated below:

"If we promote the adoption of improved technologies, and increase use of quality inputs for productivity, and link farmers, especially small holders, to processors for value addition and end-users, creating jobs in rural areas and strengthening businesses, complemented by efforts to improve nutrition, the enabling environment for private sector participation in agricultural, trade, transport and environmentally sustainable energy systems, with targeted support to enable the participation of vulnerable households, these interventions will increase rural incomes" (USAID/Nigeria's strategy 2010 – 2013).

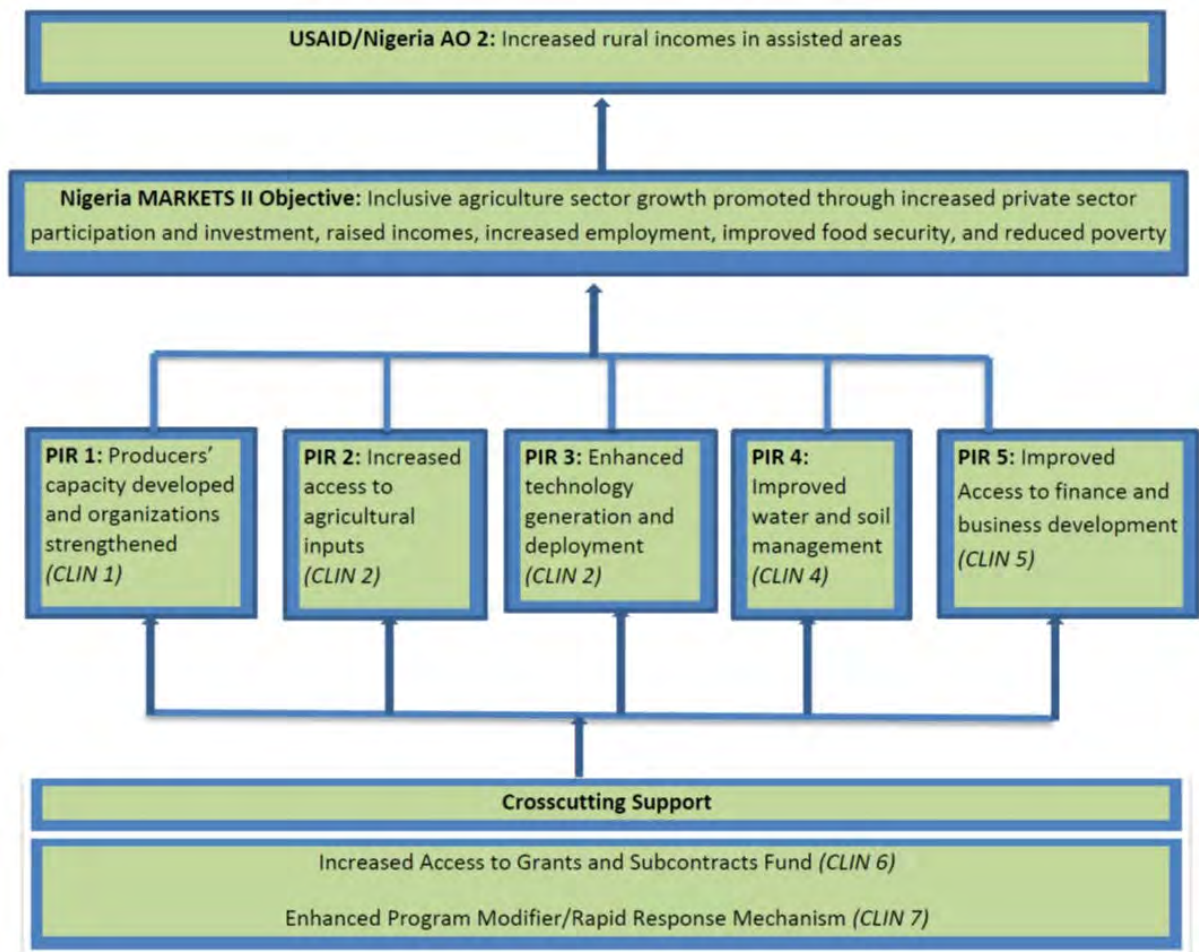
The Mission and Economic Growth Office's strategies were re-evaluated and slightly altered in the time of the activity's implementation. The Objective and Development Hypothesis were based on the strategy at the time of implementation. These continue to align with the current approved strategies.

"If we create a better business enabling environment and increase agricultural competitiveness; remove barriers to trade and investment; and improve access to and support the availability of energy and clean water, then Nigeria will reduce poverty and experience sustainable, diverse, and inclusive economic growth" (CDCS 2015 – 2019).

MARKETS II Objective and development hypothesis: Increased smallholder income from agricultural development promoted through enhanced private sector participation and investment.

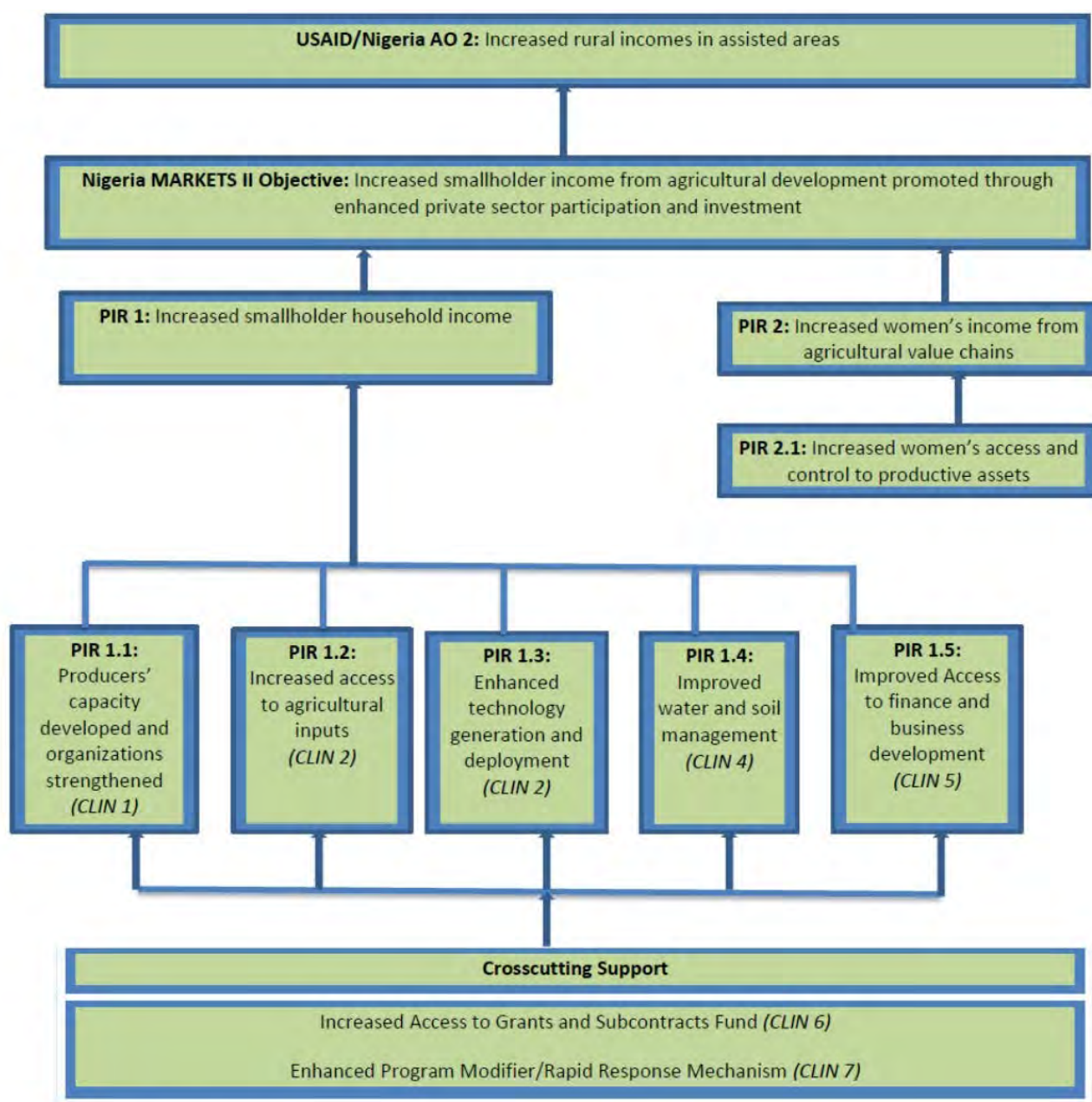
"Through a small holder focused value chain market driven approach emphasizing: Good Agronomic Practices (GAP); farming as a business; information, availability and adoption of improved and appropriate technologies including agricultural inputs and financing; enhanced linkage of farmers with value-chain off-takers (processors); significant inclusion of women and youth in the value chains, and productive engagement with the private and public sectors will result in increased and sustained rural household incomes" (November 2014).

Figure 4: MARKETS II Results Framework (July 2012)



PIR: Project Intermediate Result

Figure 5: MARKETS II Results Framework (Revised November 2014)



PIR: Project Intermediate Result

D) Approach and Implementation

Describe the approach USAID adopted to transform project resources into results. This should be done both through a brief narrative, as well as a graphic depiction. Describe any modifications that have been made to a project's design and budget, since inception.

MARKETS II supports the U.S. Government's (USG) Feed the Future (FTF) initiative and the Government of Nigeria's (GON) Agricultural Transformation Agenda (ATA) that addresses critical issues hindering the agricultural sector. The project remains committed to its market-led, demand-

driven approach of “produce what you can sell,” not “sell what you can produce.” MARKETS II’s primary clients are Nigerian farmers (men, women, young men and women) with one to five hectares of land in targeted commodity value chains and states. The project applies a buyer-led approach model across selected value chains in target states. Starting with the market to determine what agricultural products the buyer (e.g., a processor) wants and its requirements (i.e., quantity, quality, type, and period) and then provide support to smallholders to meet those requirements profitably. The project trains Nigerian farmers to see farming as a business, and aim to reduce dependence on government and donors, and in turn promote greater market orientation to increase sales and profits in the agriculture sector.

The project conducts value chain analyses to inform the selection of value chains. Aquaculture (with maize and soybean as sub-value chains), cassava, cocoa, rice, and sorghum are the value chains implemented by the project. MARKETS II operates in fifteen target states. To improve the competitiveness of selected value chains, the project strengthens producers and producer organization capacity, increase access to agricultural inputs, expand technology generation and deployment, strengthens water and soil management, and increase access to finance. Also, in line with the USAID Forward strategy, MARKETS II utilizes a grants and subcontracts fund to work in tandem with local partners to achieve development objectives and ensure sustainability.

MARKETS II’s activities are guided by five pillars:

- Maximizing the MARKETS buyer-led approach to unleash the potential of Nigerian agriculture, including the Niger Delta region in collaboration with the Foundation for Partnerships Initiatives in the Niger Delta (PIND).
- Ramping up and leveraging for reach, expanding on successes such as the fertilizer voucher program and outgrower activities with a range of Nigerian and international processors, using our directly assisted farmers and small-scale processors as demonstration models to expand project impact beyond our local government areas (LGAs), continuing to work through others, building new partnerships to develop sustainable buyer-farmer linkages, and fostering replication by GON, target state governments, donors, the private sector, and farmer groups.
- Prioritizing access to agricultural inputs, finance, and new markets which are major stumbling blocks across all value chains.
- Entering each activity with an exit strategy by defining who takes on what from day one with our role to demonstrate, scale up, and exit when milestones are met.
- Empowering Nigerian agriculture – our team’s goal is a Nigerian workforce that understands agriculture as a commercial business, including women, youth, and the vulnerable, and puts their skills and knowledge to work to bring success to their households, the agricultural sector, and Nigeria.

MARKETS II partners with Government of Nigeria’s Federal Ministry of Agricultural and Rural Development (FMARD), state ministries of agriculture and Agriculture Development Program (ADP) extension staff, commercial partners, other donors, and local and international partners.

II. EVALUATION RATIONALE

A) Evaluation Purpose

Explain broadly why this evaluation is being conducted, i.e., what is its anticipated purpose? For example, to establish the modifications that might need to be made to improve project effectiveness, or to learn to what extent the project’s goals and objectives have been achieved, or to inform specific future decisions, etc. (See [ADS 203.3.1.3](#) for triggers which may inform the purpose of an evaluation).

This final performance evaluation is intended to provide an independent examination of the overall progress and accomplishments of the MARKETS II activity in Nigeria. The evaluation will identify achievements, performance issues, and constraints related to activity implementation and effectiveness. The evaluation shall also identify results and lessons learned from implementation and will provide concise, actionable recommendations to determine which component(s) of MARKETS II

to scale up, modify, or re-design in future procurements to increase the impact of FTF investments. Evaluation findings and recommendations will be shared and discussed with USAID/Nigeria and the Bureau for Food Security in Washington, implementing partners, and relevant GON partners.

Clearly indicate whether this is a mid-term or final evaluation.

This is a final performance evaluation. In executing this assignment access would be granted to existing and relevant project or activity documents or performance information sources such as annual reports, baseline reports, work plans, etc.

B) Audience and Intended Uses

Explain who will use the results of this evaluation (e.g., specific missions, technical offices, governments, implementing partners).

The primary audience of the evaluation findings is USAID and the current implementing partners, the findings will also be used by partners and stakeholders

Table I: Audience and Intended Uses

#	Intended Use	Target Audience				
		USAID Nigeria	FTF Feedback/ Other USG	Implementing partners	GON /Other Devt. Partners	Research Communities
1	Inform Policy	✓	✓		✓	
2	Inform Project design	✓	✓	✓	✓	✓
3	Improve project monitoring	✓	✓	✓	✓	✓
4	Improve operational policy and planning	✓	✓	✓	✓	
5	Improve resource management	✓	✓	✓	✓	
6	Enhance professional growth	✓	✓	✓	✓	✓
7	Add scientific Knowledge					✓

Importantly, explain how they will most likely use the findings from this evaluation.

The result of this evaluation will be used by the USAID EGE Office to provide specific and targeted guidance on the management and future-orientation of projects. Copies of the evaluation report will be shared with relevant supporting Offices like the Office of Acquisition and Assistance, Office of Financial Management, Program Office, and implementing partners. USAID will develop a dissemination plan in accordance with the Evaluation Policy as specified in Automated Directives System (ADS) Chapter 201saj.

The final report will be published in hard and electronic copies and distributed within USAID/Nigeria and the Implementing Partner, as well as being posted to the Development Experience Clearinghouse. It will be shared with MARKETS II stakeholders. (See Table I above)

C) Evaluation Questions

List no more than five key evaluation questions that based on the information you currently have, can be answerable given time, and budget constraints. One overarching question **must** relate to the relevance of the project to the problem it aimed to address. Other questions may deal with the project's effectiveness, efficiency, impact, and sustainability.

In addressing the objectives of the evaluation, the following key evaluations questions, under three broad categories, should be answered:

1. Women/Youth: To what extent did MARKETS II address the problem of women and/or youth participation in the programmed economic activities which it aimed to address?
 - Which approaches have been most effective in reaching women and/or youth?
 - How have women and/or youth benefitted from MARKETS II implementation?
 - Are there any missed opportunities with incorporating women and/or youth into MARKETS II activities?
 - Are there any successes from MARKETS II that can be adapted to specifically integrate women and/or youth?
2. Public-Private Partnerships: What results of MARKETS II can be attributed to its PPP model?
 - This should be differentiated by size- such as small sub-contractors, large sub-contractors, or government alliances.
 - What is the value-added of partnering rather than merely sub-contracting/grants?
 - Sustainability: Did MARKETS II approach/programming create any factors that (can) enshrine sustainable effects?
 - How did the organizational capacity building work affect the sustainability of the partner organizations in PPPs?
 - To what extent are lasting results reaching the intended beneficiaries?
 - What evidence indicates that technologies and practices promoted by MARKETS II have been adopted by farmers who are not beneficiaries?
3. To what extent is the relevance of MARKETS II to the problem it aimed to address?

The analysis and findings regarding each of the evaluation questions should be followed by specific, tailored, realistic, and actionable recommendations aimed at improving outcomes.

III. TIMEFRAME & TRAVEL

A) Timeframe

Provide the timeframe for the evaluation. Start Date: FY 2017 Q2 End Date: FY 2017 Q3. Importantly, please clearly state the date by which the final evaluation report must be delivered April/May 2017.

FY 17 Q2/Q3	W K1	WK 2	WK 3	WK 4	WK 5	WK 6	WK 7	WK 8	WK 9	WK 10	WK 11	WK 12
Activities												
Contract Award												
Submission of work plan												
Review of work plan												
Preparation of												

FY 17 Q2/Q3	W K1	WK 2	WK 3	WK 4	WK 5	WK 6	WK 7	WK 8	WK 9	WK 10	WK 11	WK 12
guidelines for data collection												
Field visits/Data collection												
Data Analysis												
Preparation of Report												
Submission of draft Report												
Review Draft Report												
Review/ Accept Final Report												

B) Travel

If travel to field sites is suggested for data collection, please list destination(s), and duration of travel.

S/N	Destinations	Value Chain	Duration (days)
1	FCT, Nasarawa, Benue & Ebonyi	Rice, Soybean	7
2	Kaduna, Kano, Sokoto	Maize, Sorghum, Rice	7
3	Lagos, Oyo, Ondo	Aquaculture, Cocoa	7

Security Requirements

Security measures in Nigeria are critical due to threats by extremist groups in the country, the U.S. Mission in Nigeria regularly issue travel warnings and informational analysis in this respect.

IV. DELIVERABLES

A) Deliverables

Review the list of Deliverables listed in the PEEL Task Order contract. If you require different deliverables than those listed in the contract, please list them.

All deliverables listed in Section F.7 of the PEEL Task Order contract.

The following deliverables will be submitted to USAID/Nigeria. The timeline for submission of deliverables will be finalized and agreed upon with the contractor.

1. Evaluation work plan and timeline: The evaluation work plan and timeline will be developed in consultation with USAID/Nigeria.
2. Detailed Report Outline: This will be agreed upon during the team presentation meeting.
3. Evaluation design/methodology, including questionnaire/guidelines for conducting key informant interviews/focus group discussion guides: These documents will be prepared and submitted to USAID/Nigeria for review and approval prior to the initiation of key informant interviews and site visits.
4. Other Evaluation Materials (list of proposed sites, and list of respondents): Some of these materials such as list of sites to be visited will be shared with USAID/Nigeria prior to visiting the field. List of respondents interviewed as key informants especially will also be provided upon return from field visit.

5. Interview Notes and completed surveys: All interview notes and completed survey instruments used for the evaluation will be submitted to USAID/Nigeria. The data used for analysis will also be submitted to USAID/Nigeria.
6. Debriefing(s): The Team Leader will regularly debrief USAID/Nigeria on the progress being made with the evaluation during field work. At the end of field work, a debriefing meeting will occur with USAID/Nigeria (EGE Team) and include the evaluation team's findings, conclusions, and recommendations, before they leave Nigeria. PowerPoint presentations (one electronic copy as well as hard copies) for the debriefing will summarize findings, conclusions, and recommendations and will be distributed during the meeting.
7. Draft Evaluation Report: A synthesized draft report will include, at a minimum, the following: scope and methodology used; important findings (empirical facts collected by evaluators); conclusions (evaluators' interpretations and judgments based on the findings); recommendations (proposed actions for management based on the conclusions); and lessons learned (implications for future designs and for others to incorporate into similar programs). The evaluation team will provide USAID/Nigeria with a draft report that includes all the components of the final evaluation report within 10 days after their departure from Nigeria. USAID/Nigeria will provide written comments on the draft report to the evaluation team within 10 working days of receiving the draft report.
8. Final Evaluation Report: In addition to being compliant with the criteria of ensuring the quality of the evaluation report, the final report will address the comments provided by USAID/Nigeria and other stakeholders on the draft report. The Evaluation Team Leader will revise the draft report and deliver a final revised version to USAID/Nigeria within three weeks of receiving USAID feedback. The final report in both hard and electronic format will include all elements described in ADS 201mah USAID Evaluation Report Requirements and will be submitted to USAID/Nigeria and approval given before submission to the Development Experience Clearinghouse (DEC).
9. Datasets and all supporting documentation, qualitative and/or quantitative data should be submitted as part of ADS 579.3.2.6.

V. TEAM COMPOSITION & SUGGESTED LOE

Describe the intended size of the evaluation team, the roles and responsibilities of team members, specific qualifications that team members are expected to possess, and the manner that their qualifications will contribute towards the evaluation effort.

The Evaluation Team will consist of five key members, including at least one **(I) international** consultant (who will lead the team) and local consultants. The team members should represent a balance of several types of knowledge and expertise related to agricultural development. USAID/Nigeria recommends the following staffing structure for the evaluation:

Team Leader: An international Senior Evaluation Specialist with extensive experience in evaluating agriculture activities in developing countries. At least seven (7) years of experience in evaluation management, and qualitative data collection and analysis. S/he must have experience in conducting evaluations and designing performance evaluations as well as the ability to produce highly quality evaluation reports in English. Strong interpersonal skills are required.

The Team Leader will be responsible for the overall management of the evaluation, including coordinating and packaging the deliverables. The team leader will develop the outline for the draft report, present the report, and after incorporating USAID/Nigeria staff comments, submit the final report to USAID/Nigeria within the prescribed timeline.

In addition to the responsibilities outlined above, the Team Leader will:

Preparations

1. Finalize and negotiate with USAID/Nigeria the team's work plan.
2. Establish assignment roles, responsibilities, and tasks for each team member.
3. Ensure that the logistics arrangements in the field are complete.
4. Ensure gender-sensitive data collection methods, e.g., ensuring both men and women team members, noting different cultural environment between the north and south, etc.

Management

1. Take the lead on preparing, coordinating team member input, submitting, revising, and finalizing the assignment report.
2. Manage the process of report writing.
3. Manage team coordination meetings in the field.
4. Coordinate the workflow and tasks and ensure that team members are adhering to the schedule.

Communication

1. Handle conflict within the team.
2. Serve as primary interface with USAID/Nigeria and serve as the spokesperson for the team.
3. Debrief USAID/Nigeria as the evaluation progresses and organize a final debriefing.
4. Keep the USAID/Nigeria apprised of progress challenges, work changes, team travel plans in the field, and report preparation via phone conversation or email at least once a week.
5. Serve as primary interface with USAID/Nigeria for the submission of draft and final reports and deliverables to USAID/Nigeria.
6. Make decisions in conjunction with USAID/Nigeria about the safety and security of the team.

Other team members will include:

A host-country national **Senior Agricultural Economist**, with experience in evaluation of agricultural value chains and markets in developing countries; at least five (5) years of experience in agricultural program management and some experience managing or implementing research programs, preferably rice and/or small ruminants. West Africa/regional experience required. Ability to conduct interviews and discussions in English and at least one major Nigerian language. Strong English language writing skills.

A host country senior or mid-level **Social Scientist** with strong analytical skills and gender expertise. The incumbent must be able to conduct interviews and focus group discussion, analyze the resulting data, and be familiar with qualitative and quantitative data collection methods. Strong English language speaking with at least one major Nigerian language and Strong English language writing skills

A host country or international mid-level **Sustainable Growth Expert**, with experience in public-private partnerships; at least three (3) years of experience in organizational capacity building/assessment required.

A national **Evaluation Specialist** with at least five (5) years relevant experience and strong logistics and planning skills.

At least one of senior technical team member must have experience analyzing data from agricultural value-chain projects. At least one of the senior team members should have significant experience with gender integration and institutional capacity experience and expertise.

USAID leaves to the offeror's discretion other necessary team members/staff for the evaluation (e.g., logistics, scheduling and translation; data analysis). Aside from the above mentioned key personnel, the offeror must decide how the evaluation team should be structured to successfully address the

evaluation questions. All attempts should be made for the team to be gender balanced and to include local (Nigerian) experts. A statement of potential bias or conflict of interest (or lack thereof) is required from each team member.

All personnel/evaluation team members are to provide a written disclosure of conflicts of interest (COI) and key personnel to submit their COI disclosure with the proposal.

Provide information about the suggested LOE (in hours) of each team member.

Title		LOE (hours)
International Team Lead		424
Senior Agricultural Economist		384
Social Scientist		368
Sustainable Growth Expert		368
Evaluation Specialist		368

VI. Intended Participation of Other Parties

USAID may propose internal staff from USAID/Nigeria or from Washington, Implementation Partners, National Counterparts, and/or beneficiaries to accompany the team in this evaluation as observers. As observers, their role will be to provide guidance and background information, and to reply to the external evaluators' questions. They will review and comment on the report for accuracy, but evaluators may accept or reject comments. The final report should reflect the opinions of the external evaluators and is the sole responsibility of the selected evaluation team.

ANNEX B: EVALUATION TEAM

Dr. Paul Amaza (Team Leader): Dr. Amaza is an international agricultural economic development professional with over 25 years of experience in evaluation, baseline studies, impact assessments (using both participatory and formal survey approaches), food security, poverty, seed systems and policy, value chains, agribusiness, capacity building, and training. Dr. Amaza previously served as Professor of Agricultural Economics at the University of Jos, Nigeria and on the staff of the International IITA. He has also undertaken numerous consultancies, including evaluations for the World Vegetable Center (AVDRC), Alliance for a Green Revolution in Africa (AGRA), the World Bank, the African Development Bank (ADB), United Nations Development Programme (UNDP), USAID, and others. A recent assignment with USAID entailed identifying opportunities for increased commercialization and investment in agriculture in Northeast Nigeria. In addition to working in his native Nigeria, his geographic experience also includes Ghana, Kenya, Liberia, Mali, Nigeria, Tanzania, Uganda, and Zambia. Dr. Amaza earned his doctoral degree in Agricultural Economics from the University of Ibadan. He also holds Masters' degrees in economics from the University of Nottingham and in Agricultural Economics from University of London, as well as a Bachelors' degree in agriculture from the University of Maiduguri.

Ngukwase Surma (Social Scientist/Gender Specialist): Ngukwase Surma is social scientist and gender specialist with over 20 years of in development experience in various sectors including labor, community education, accountability, facilitation of gender, and social inclusion training, and research for CBOs and government Ministries. She also has significant experience in program design, implementation, and evaluation. Over the last 7 years, she has worked as a gender and social inclusion and media consultant for international NGOs and donor agencies. Ms. Surma has extensive experience in Nigeria both as a consultant, for over 10 years, and as the Executive Director for Connecting Gender for Development (COGEN) and, since 2004, as the Chairperson of the Advocacy Committee for the National Coalition on Affirmative Action (NCAA). Ms. Surma has Masters' degrees in social policy from the University of York and in International Law and Diplomacy from the University of Jos. She also holds a Bachelors' degree in sociology from the University of Jos and a graduate diploma in Education from the National Teacher Institute in Kaduna, Nigeria.

Olyinka Martins (Evaluation Specialist): Olyinka Martins an M&E specialist with 10 years of experience in evaluation, project management, and training. She has experience in data collection, surveys, and in the design and implementation of performance monitoring and work plans and tools in a variety of fields. Ms. Martins previously worked with bilateral and international agencies and institutions in Nigeria, such as the National Democratic Institute (NDI), USAID, World Health Organization (WHO), and United Nations Children Fund (UNICEF), as well as with the Nigerian Ministry of Health. Ms. Martins earned her Masters' degree in Development Studies from Bayero University and holds a Bachelors' degree in sociology from Ahmadu Bello University Zaria. She is proficient in SPSS.

Yemisi Micah Evaluation Assistant: Yemisi Idowu Micah has over (10) years' experience in planning, supervising, M&E, and carrying out qualitative and quantitative research surveys and extension services especially those addressing rural livelihood and agriculture. She has a wealth of experience also in conducting impact evaluations, development of survey questionnaires, data entering, cleaning of data and general database management, data analysis, and report writing. She holds a Bachelor of Technology in Agricultural Economics and Extension from Ladoke Akintola University of Technology, and Masters' of Science in agricultural economics from Bayero University.

ANNEX C: PERFORMANCE MANAGEMENT PLAN

Table I: Performance Monitoring Plan

Indicator #	Feed the Future IR	Indicator Type	Performance Indicators	CLIN
I	IR I: Improved Agriculture Productivity	FTF 4.5-4	Gross Margin per unit of land, kilogram, or animal of selected product (crops/animals/fisheries)	I
2	Sub IR I.1 Enhanced Human and Institutional Capacity Development for Increased Sustainable Agriculture Sector Productivity	FTF 4.5.2-5	Number of farmers and others who have applied new technologies or management practices as a result of USG assistance	3 & 4
3	Sub IR I.1 Enhanced Human and Institutional Capacity Development for Increased Sustainable Agriculture Sector Productivity	FTF 4.5.2-7	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training disaggregated	I
4	Sub IR I.1 Enhanced Human and Institutional Capacity Development for Increased Sustainable Agriculture Sector Productivity	FTF 4.5.2-11	Number of food security private enterprises (for profit), producer organizations, water user associations, women's groups, trade and business associations, and CBOs receiving USG assistance	I
3	Sub IR I.1 Enhanced Human and Institutional Capacity Development for Increased Sustainable Agriculture Sector Productivity	FTF 4.5.2-27	Number of members of producer organizations and CBOs receiving USG assistance	I

Indicator #	Feed the Future IR	Indicator Type	Performance Indicators	CLIN
6	Sub IR 1.1 Enhanced Human and Institutional Capacity Development for Increased Sustainable Agriculture Sector Productivity	FTF 4.5.2.-28	Number of private enterprises (for profit), producers organizations, water users' associations, women's groups, trade and business associations, and CBOs that applied new technologies or management practices as a result of USG assistance	3 & 4
7	Sub IR 1.2 Enhanced Technology Development, Dissemination, Management, and Innovation	FTF 4.5.2-2	Number of hectares under improved technologies or management practices as a result of USG assistance	3
8	Sub IR 1.2 Enhanced Technology Development, Dissemination, Management, and Innovation	FTF 4.5.2-39	Number of new technologies or management practices in one of the following phases of development: under research as a result of USG assistance, under field testing as a result of USG assistance, or made available for transfer as a result of USG assistance	3
9	Sub IR 1.2 Enhanced Technology Development, Dissemination, Management, and Innovation	4.5.2-13	Number of rural households benefitting directly from USG assistance	1
10	IR 2 Expanding Markets and Trade	4.5.2-23	Value of incremental sales (collected at farm level) attributed to FTF (\$)	1 & 5
11	Sub IR 2.4 Improved Access to Business Development and Sound and Affordable Financial and Risk Management Services	4.5.2-29	Value of Agricultural and Rural Loans (\$ millions)	5
12	Sub IR 2.4 Improved Access to Business Development and Sound and Affordable Financial and Risk Management Services	4.5.2-30	Number of micro, small, and medium enterprises (MSMEs), including farmers, receiving USG assistance to access loans	5
13	Sub IR 2.4 Improved Access to Business Development and Sound and Affordable Financial and Risk Management Services	4.5.2-37	Number of MSMEs, including farmers, receiving business development services from USG assistance sources	1 & 5

Indicator #	Feed the Future IR	Indicator Type	Performance Indicators	CLIN
14	IR 3 Increased Investments in Agriculture and Nutrition-Related Activities	4.5.2-12	Number of public-private partnerships formed as a result of USG assistance	1
15	IR 3 Increased Investments in Agriculture and Nutrition-Related Activities	4.5.2-12	Value of new private sector investment in the agriculture sector or food chain leveraged by the Feed the Future implementation	5
16	IR 3 Increased Investments in Agriculture and Nutrition-Related Activities	4.5.2-43	Number of firms (excluding farms) or CSOs engaged in agricultural and food security-related manufacturing and services now operating more profitably (or at above cost) because of USG assistance	1 & 5
17	IR 4 Increased Employment Opportunities in Project-Level, Targeted Value Chains	FTF 4.5-2	Number of jobs attributed to Feed the Future Implementation	1
18	IR 5 Increased Resilience of Vulnerable Communities and Households	FTF 3.3.3-15	Number of USG social assistance beneficiaries participating in productive safety nets	1 - 5
19	IR 5 Increased Resilience of Vulnerable Communities and Households	FTF 4.5.2-14	Number of vulnerable households benefiting directly from USG interventions	1 - 5
20	IR 8 Improved Use of Maternal and Child Health and Nutrition Services	FTF 3.1.9-1	Number of people trained in child health and nutrition through USG-supported programs	1
21	IR 8 Improved Use of Maternal and Child Health and Nutrition Services	FTF 3.1.9-15	Number of children under five reached by USG-supported nutrition programs	1
22	Sub IR 3.1 Increased Public-Sector Investment	CUSTOM	Public and private funds leveraged for agriculture and rural development (\$ millions)	5
24	IR 1: Improved Agriculture Productivity	CUSTOM	Increased productivity of selected commodities	1
25		Custom		6

Indicator #	Feed the Future IR	Indicator Type	Performance Indicators	CLIN
	MARKETS II Grants and Subcontracts Fund		Number of Beneficiaries under the Grants and Subcontracts Fund	
26		Custom	Amount of grants and subcontract funds awarded in millions (\$)	6

ANNEX D: INTERVIEWS

Table 2: Interview List

List of Interviews
Response
Agerashi Soybean Growers Group
Soybean
Total of Members Interviewed: 10
Response
Agerashi Soybean Growers Tarka, Benue
Total of Members Interviews: 12
Mixed COOP-SOYA
Response
Uchi Beekeeping Cooperative Society
Soybean
Total of Members Interviews: 26
Response
Uchi Beekeeping Cooperative, Tarka
Soybean & Beekeeping
Total of Members Interviews: 7
Response
Akwety Akpa Rice Farmers Association
Rice Group
Total of Members Interviews: 19
Response
Akwety Akpa Multipurpose, Otukpo LGA
Mixed, Rice
Total of Members Interviews: 16
Response
Mbatyo Soybean Growers
Soybean
Total of Members Interviews: 20
Response
Debera Farms Multipurpose Cooperative Society
Farming Rice
Total of Members Interviews: 18
Response
Upupuu Multipurpose Cooperative Society
Rice Association
Total of Members Interviews: 11
Response
Owo Youth Wings Cooperative Society
Cassava Farmers
Total of Members Interviews: 25
Response
Ohueze Cassava Farmers. Ohueze Owo
Cassava Farmers
Total of Members Interviews: 17
Response
Irewolede Farmers CMS Ose
Farmers Group (Cassava)
Total of Members Interviews: 27
Response
Temidare Arimoge MPCS
Cassava
Total of Members Interviews: 26

List of Interviewees
Response
Hedajo Ala MPCS, Ondo North
Cocoa
Total of Members Interviews: 12
Response
Hedajo Ala MPCS, Ondo North
Cocoa Farming
Total of Members Interviews: 14
Response
Osaca Youth Fish Farming
Fish Farming
Total of Members Interviews: 16
Response
Redeemer
Women Fishery, Aponmu
Total of Members Interviews: 10
Response
Divine Grace Fish Farmers Association
Fish Farming
Total of Members Interviews: 7
Response
Kofar Kudu Arewa
Sorghum Farmers Association
Total of Members Interviews: 6
Response
Gidan Gunda Farmers Association
Women Association Farmers
Total of Members Interviews: 25
Response
Zaman Lafiya Umma Rice Cooperative Korafi
Rice Farmers and Processing
Total of Members Interviews: 17
Response
Kaukai Farmers Association
Rice Farmers
Total of Members Interviews: 7
Response
Gudun Ruwa Farmers Association
Gudun Ruwa Farmers Association (Sorghum)
Total of Members Interviews: 13
Response
Women Multipurpose Cooperative Society
Farming Sorghum
Total of Members Interviews: 5
Response
Katsinawa Salama Farmers C&S
Farming Sorghum
Total of Members Interviews: 5

List of Interviewees	
Response	
Katsinawa Women Farmers Coop Society	
Sorghum Women	
Total of Members Interviews: 21	
Response	
Angwan Tanko Farmers' Cooperative	
Soybean Farmers	
Total of Members Interviews: 7	
Response	
Kungiyar Soybean MPCs Angwan Tanko	
Soybean Farmers	
Total of Members Interviews: 9	
Response	
Zumunta Saya-saya Farmers Crop	
Soybean Farmers	
Total of Members Interviews: 43	
Zumunta Saya-saya	
Response	
Buda Youth Farmers Association	
Maize Farmers Association	
Total of Members Interviews: 16	
Response	
Igabi Cassava Farmers' Cooperative	
Maize Farmers	
Group	Position
Igabi Cassava Farmers	Chairman
Igabi Cassava Farmers	Member
Igabi Cassava Farmers	Secretary
Igabi Cassava Farmers	Member
Igabi Cassava Farmers	Treasurer
Igabi Cassava Farmers	Member
Igabi Cassava Farmers	Member
Igabi Cassava Farmers	Member
Response	
Kajura Pambugu Women Multipurpose	
Soybean Farmers	
Total of Members Interviews: 6	
Response	
Kabi Angwan Liman Women Rice Processor Multipurpose Cooperative Society	
Rice	
Total of Members Interviews: 5	

ANNEX E: KEY INFORMANT INTERVIEWS BY STAKEHOLDER GROUP

#	Position
1	Managing Director MARKETS II
2	Communication Manager MARKETS II
3	Director, Housing Economic Strengthening MARKETS II
4	FMARD
5	FMARD
6	Monitoring & Evaluation Director MARKETS II
7	Director, Agricultural Productivity MARKETS II
8	Director, External Relations MARKETS II
9	IFDC
10	BNARDA Programme Manager
11	BNARDA Director Extension Services
12	Hule & Sons Limited
13	International Institute of Tropical Agriculture (IITA)
14	Mikap Rice Processors
15	DA-ALL GREEN SEEDS Limited
16	Feedtek Limited
17	KADP
18	KADP
19	KADP
20	Greenspore Agric. Ltd.
21	Umza International Farms
22	KNARDA
23	KNARDA
24	KNARDA
25	KNARDA
26	Women Extension Agent, KNARDA
27	Egalf Venture
28	Off-taker Soybean
29	Off-taker Rice
30	Fortis MFI, Makurdi branch
31	Institutional Capacity Building Specialist, Egalf Ventures
32	Conservation Alliance Country Manager
33	Matna Foods Chief Operation Officer
34	Matna Foods FM
35	Matna Foods RMM
36	Matna Foods DDI
37	Matna Foods Chief Operation Officer
38	Human Resource Manager, Matna Foods
39	Cocoa Conservation Alliance
40	Greater Glory Hatchery
41	Tulip Cocoa Processing
42	ODSADP
43	MARKETS II Desk Manager, ODSADP
44	The Ark-Shore Konsult (TASK)

ANNEX F: EVALUATION TOOLS

F.I KEY INFORMANT INTERVIEW GUIDES

F.I.1 Key Informant Interview Guide – Staff Involved in Agriculture and Agricultural Marketing¹

A. Farmer/Farmer Organization Training Approach²

1. In your reports/workplans, you mention making use of “Lead Farmers” to establish demonstrations.
 - a. How were the Lead Farmers selected?
 - b. How were they trained?
 - c. Were they provided inputs for free/at a subsidized price? If so, were they required to share their harvested produce with group members? Or provide any products (e.g., seed) to the other farmers/the community/the project? If “payback” was required.
 - d. What would you estimate to be the overall success rate, broken down by value chain?
 - e. Did you seek any feedback from the farmer groups on whether or not they were satisfied?
 - f. How did they benefit from this approach?
 - g. Did selected members of the group under a given lead farmer go on to become lead farmers themselves (i.e., the “cascade approach”)?
 - h. Was any assessment conducted once the lead farmer had completed their demonstrations/training to see if they themselves continued with the new techniques and technologies, without being provided further inputs?
2. Did you employ any other farming training techniques, and if so, please describe?
3. Did you regularly consult the farmers/farmer organizations as to whether they believed the training was adequate and appropriate, and modify the lead farmer training methodology based on their answers? If yes, could you please describe some examples?
4. Could you provide an estimate (approximate) of the “attrition rate” of farmers who abandoned the project’s activities before the targeted end date? If so, could you please explain the reason why said farmers decided to cease to work with the project (poor health/death of family members, need to relocate to a new geographical area, pest/disease outbreak, changes in climate, inability to access input/output markets, decline in interest in working with project, etc.)? If the attrition rate was higher in some value chains and/or geographical areas, please specify which ones (value chains/States).
5. For those states/value chains in which MARKETS II ceased activities in February 2016 or February 2017, have any follow-up studies (informal or formal) been conducted to assess where and with which value chains the beneficiary farmers have continued with the activities launched by the project? If so, could you please provide us with the results of these studies?

B. Supply Chains – Inputs

1. Please describe how the following inputs and materials were provided to the farmers/farmers’ organizations/processors (for free, partially subsidized, paid back “in kind,” etc.); if beneficiaries contributed in the form of labor, provision of materials, etc., please note:
 - a. Seeds
 - b. Fertilizer

- c. Any chemicals (insecticides, fungicides, herbicides, inoculants, etc.)
 - d. Planting material (cassava cuttings, grafted cocoa scions, if any were disseminated)
 - e. Field tools (plows, mechanized sowing/weeding equipment, chemical application, etc.)
 - f. Harvesting equipment
 - g. Processing equipment (e.g., threshers, grading and cleaning equipment)
 - h. Storage equipment/facilities [hermetically sealed grain bags such as Purdue Improved Crop Storage (PICS), storage rooms]
2. Same as the first question, except that in respect of aquaculture inputs and materials (fingerlings, pond construction, harvesting tools, etc.)
 3. Is there or will there be by end of project a locally available, accessible, and affordable supply chain for each of the items indicated above? If yes, please specify source of each.

C. Supply Chains – Output Markets

1. What are the types of linkages established between the producers/producer organizations and output markets (be they traders, wholesalers, retailers, and/or processors) for each value chain? Please describe.
2. What are, in your opinion, the greatest risks/weakest links, which may impede producers' access to output markets?
3. Have you estimated cause and degree of postharvest losses from harvesting to marketing/processing? If so, could you please describe what they are for each value chain? If there are differences between different states, please include these details.
 - a. Did the project undertake any activities to reduce postharvest losses?
 - b. If so, please describe (again, according to value chain and geographical area)?

D. Questions on Results Reported

1. In Annex A, Progress Summary, of your last quarterly report, data are provided on EG.3.2-I: Number of individuals who have received USG supported short-term agricultural sector productivity or food security training. Were any follow-up data collected on the **result** of these trainings? If so, please share these results with us. If not, please explain why not.

F.1.2 Key Informant Interview Guide – Staff Involved with Gender and Youth (guide for youth)

This guide is for MARKETS II reach to youths. Interview with the same staff interviewed for engagement with women except if different staff work on women and youth issues. [Interviews are intended to be semi-structured and open-ended. These questions are a general guideline leaving room for probing experiences with MARKETS II interventions in the various value chains. Questions address the experiences of youth]. The findings of this evaluation will be written to keep respondents identity anonymous; responses will not be identified with you personally.

Identifier	Response
Interview number	
Date	
Location of interview	
Duration of interview	
Consent form signed/given	
Name(s) of Evaluation Team Member(s):	
Name(s) of Gender/Youth Staff interviewed and organizational name:	

I. Which approaches have been most effective³ in reaching youth?

- How did MARKETS II reach youths?
- Were there different strategies for reaching this population? Yes No
- If there were which strategies had the greatest impact reaching youths?
- What were the strengths and weaknesses of this approach (the most effective identified above)? How do you think these strengths could be maximized subsequently?
- How then did the project measure its achievements in reaching youths?
- Did the project reach the numbers of youth intended? Yes No
- In which value chain would you say this was highest and why?

GNDR (4): Proportion of target population reporting increased agreement with the concept that men and women should have equal access to social, economic, and political opportunities:

- This indicator was not reported in each quarter. What was the interval between measurements and was this how it was planned? Please explain?
- What were the challenges, measuring this?
- From your professional assessment would you say responses were a true reflection of realities?
- Were there any challenges integrating youth in the program? To what extent was the youth and women's integration plan helpful in reaching young men and young women?
- What were the challenges encountered in reaching youths? Could they have been minimized or avoided? How, please explain further?
- Were there different successes and challenges in reaching young men and young women? Yes No
- What were differences in terms of successes?
- What were the differences in these challenges?
- Were there any unexpected outcomes?

2. How have youths benefitted⁴ from MARKETS II implementation?

- In what ways have youths benefitted, what are they taking away from their interaction with MARKETS II? (In each value chain: aquaculture; maize; soybean; cocoa; rice; sorghum; cassava.)
- To what extent would you say youths were mainstreamed⁵ in all seven value chains during the project implementation? Please explain.
- How did the project measure different aspects of empowerment [decision-making/participation/leadership; access to resources (inputs)/technology; access to markets; income youth; access to health; sexual and gender-based violence (SGBV) services, etc.]?
- How would you rate the benefits of the program to youths? Very satisfactory Satisfactory
Not satisfactory?
- What informs your rating?
- What were the challenges? How could they have been avoided?
- Were there any **unexpected** outcomes?

3. Were there any missed opportunities to incorporate youth into MARKETS II activities?

- What else would you have liked to see MARKETS II do to reach youths across all value chains especially in high earning value chains such as aquaculture?
- Are there other opportunities that could have been explored? Yes No If yes, please explain?
- What could have been done better or differently to reach more youths (Probe for each of the seven value chains, for youths)?

4. Were there any successes from MARKETS II that can be adapted to specifically integrate youth in future activities?

- What success from MARKETS II with the integration of youth would you recommend for other projects/MARKETS III? These successes could be value chain-specific?
- What challenges did you experience in integrating youths in this project?
- Any recommendation for both an agriculture and non-agriculture project? Why do you consider this a success worth replicating elsewhere?

F.1.3 Key Information Interview Guide – Staff Involved with Gender and Youth (guide for women)

This guide is for MARKETS II reach to women. Interview with the same staff interviewed for engagement with women except if different staff work on women and youth issues. [Interviews are intended to be semi-structured and open-ended. These questions are a general guideline leaving room for probing experiences with MARKETS II interventions in the various value chains. Questions address the experiences of youth]. The findings of this evaluation will be written to keep respondents identity anonymous; responses will not be identified with you personally.

Identifier	Response
Interview number	
Date	
Location of interview	
Duration of interview	
Consent form signed/given	
Name(s) of Evaluation Team Member(s):	
Name(s) of Gender/Youth Staff interviewed and organizational	

name:	
-------	--

I. Which approaches have been most effective⁶ in reaching women?

- a. How did MARKETS II reach women?
- b. Were there different strategies for reaching this population? Yes No
- c. If there were which strategies had the greatest impact reaching women?
- d. What were the strengths and weaknesses of this approach (the most effective identified above)? How do you think these strengths could be maximized subsequently?
- e. How would you rate MARKETS II's achievement in terms of reaching women?
- f. Which value chain had the highest reach to women? What would you say was responsible for this?
- g. For the others, what do you think was responsible for lower reach to women?
- h. What could have been done differently to reach more women? Probe for all value chains even those with highest reach?

A look at the custom Gender indicators, **GNDR (3): Proportion of women who report increased self-efficacy at the conclusion of USG supported training/programming** and **for GNDR (4): Proportion of target population reporting increased agreement with the concept that men and women should have equal access to social, economic, and political opportunities:**

- a. These indicators were not reported in each quarter. What was the interval between measurements and was this how it was planned? Please explain?
- b. What were the challenges, measuring this?
- c. From your professional assessment would you say responses were a true reflection of realities?
- d. E.G 3.2-3: Number of MSMEs including farmers, receiving USG assistance to access loans:
 - How did the project achieve these very impressive numbers of women...there were more women consistently in this indicator?
 - Were there any challenges integrating women in the program? To what extent was the youth and gender integration plan helpful in reaching women?
 - What were the challenges encountered in reaching women? Could they have been minimized or avoided? How, please explain further?
 - Were there any unexpected outcomes?

2. How have women and/or youth benefitted⁷ from MARKETS II implementation?

- a. In what ways have women benefitted, what are they taking away from their interaction with MARKETS II? (In each value chain: aquaculture; maize; soybean; cocoa; rice; sorghum; cassava.)
- b. To what extent would you say women were mainstreamed⁸ in all seven value chains during the project implementation? Please explain.
- c. How did the project measure different aspects of empowerment [decision-making/participation/leadership; access to resources (inputs)/technology; access to markets; income earned by women; access to maternal health services/health; SGBV services, etc.]?
- d. How would you rate the benefits of the program to women? Very satisfactory Satisfactory Not satisfactory?

- e. What informs your rating?
 - f. What were the challenges? How could they have been avoided?
 - g. Were there any unexpected outcomes?
- 3. Were there any missed opportunities to incorporate women into MARKETS II activities?**
- a. What else would you have liked to see MARKETS II do to reach women across all value chains especially in high earning value chains such as aquaculture?
 - b. Are there other opportunities that could have been explored? Yes No If yes, please explain?
 - c. What could have been done better or differently to reach more women (probe for each of the seven value chains, for women)?
- 4. Were there any successes from MARKETS II that can be adapted to specifically integrate women in future activities?**
- a. What success from MARKETS II with the integration of women would you recommend for other projects/MARKETS III? These successes could be value chain specific?
 - b. What challenges did you experience in integrating women in this project?
 - c. Do you have any recommendations for both an agriculture and non-agriculture projects? Why do you consider this a success worth replicating elsewhere?

F.1.4 Key Informant Interview Guide – Staff Involved with Women and Youth (guide for youth)

This guide is for MARKETS II reach to youths. Interview with the same staff interviewed for engagement with women except if different staff work on women and youth issues. [Interviews are intended to be semi-structured and open-ended. These questions are a general guideline leaving room for probing experiences with MARKETS II interventions in the various value chains. Questions address the experiences of youth]. The findings of this evaluation will be written to keep respondents identity anonymous; responses will not be identified with you personally.

Identifier	Response
Interview number	
Date	
Location of interview	
Duration of interview	
Consent form signed/given	
Name(s) of Evaluation Team Member(s):	
Name(s) of Women/Youth Staff interviewed and organizational name:	

I. Which approaches have been most effective⁹ in reaching youth?

- How did MARKETS II reach youths?
- Were there different strategies for reaching this population? Yes No
- If there were which strategies had the greatest impact reaching youths?
- What were the strengths and weaknesses of this approach (the most effective identified above)? How do you think these strengths could be maximized subsequently?
- How then did the project measure its achievements in reaching youths?
- Did the project reach the numbers of youth intended? Yes No
- In which value chain would you say this was highest and why?

GNDR (4): Proportion of target population reporting increased agreement with the concept that men and women should have equal access to social, economic, and political opportunities:

- This indicator was not reported in each quarter. What was the interval between measurements and was this how it was planned? Please explain.
- What were the challenges measuring this?
- From your professional assessment would you say responses were a true reflection of realities?
- Were there any challenges integrating youth in the program? To what extent was the youth and women integration plan helpful in reaching young men and young women?
- What were the challenges encountered in reaching youths? Could they have been minimized or avoided? How, please explain further?
- Were there different successes and challenges in reaching young men and young women? Yes No
- What were differences in terms of successes?
- What were the differences in these challenges?
- Were there any unexpected outcomes?

2. How have youths benefitted¹⁰ from MARKETS II implementation?

- a. In what ways have youths benefitted, what are they taking away from their interaction with MARKETS II? (In each value chain: aquaculture; maize; soybean; cocoa; rice; sorghum; cassava.)
- b. To what extent would you say youths were mainstreamed¹¹ in all seven value chains during the project implementation? Please explain.
- c. How did the project measure different aspects of empowerment [decision-making/participation/leadership; access to resources (inputs)/technology; access to markets; income youth; access to health; SGBV services, etc.]?
- d. How would you rate the benefits of the program to youths? Very satisfactory Satisfactory
Not satisfactory?
- e. What informs your rating?
- f. What were the challenges? How could they have been avoided?
- g. Were there any unexpected outcomes?

3. Were there any missed opportunities to incorporate youth into MARKETS II activities?

- a. What else would you have liked to see MARKETS II do to reach youths across all value chains especially in high earning value chains such as aquaculture?
- b. Are there other opportunities that could have been explored? Yes No If yes, please explain?
- c. What could have been done better or differently to reach more youths (probe for each of the seven value chains, for youths)?

4. Were there any successes from MARKETS II that can be adapted to specifically integrate youth in future activities?

- a. What success from MARKETS II with the integration of youth would you recommend for other projects/MARKETS III? These successes could be value chain-specific?
- b. What challenges did you experience in integrating youths in this project?
- c. Any recommendation for both an agriculture and non-agriculture project? Why do you consider this a success worth replicating elsewhere?

F.1.5 Key/Group Informant Interview Guide – Sub-Contractor (IFDC)

Name(s) of Evaluation Team Member(s):

Name(s) of IFDC Staff Interviewed:

Date:

Location:

Consent Form Signed:

1. Please provide the period of time over which your organization worked with MARKETS II.
2. Could you please explain how IFDC helped MARKETS II farmers to have improved access to quality agro-inputs (please list name of input, and if methodology was different from one input to another, please describe how it differed for each)? If possible, disaggregate by site and value chain.
3. Please list the beneficial farm practices you helped MARKETS II farmers to adopt (again, disaggregating by site and value chain).
4. Could you please explain how IFDC helped MARKETS II farmers to improve their adoption of more beneficial farm practices? Again, if different methodologies were used for different practices, please describe each separately, and please disaggregate by site and value chain.
5. If IFDC conducted any M&E of the rate of adoption of quality inputs, please share your findings with us (again, disaggregated by input, site, and value chain, if possible).
6. If IFDC conducted any M&E of the rate of adoption of beneficial practices, please share your findings with us (again, disaggregated by practice, site, and value chain, if possible).
7. Did IFDC conduct any soil/foliar analyses before and after improving farmers' access to quality inputs? If so, please share your results with us (again, disaggregated by input/farm practice, site, and value chain, if possible).

F.1.6 Key Informant Interview Guide – Staff Involved in Access to Finance

Date:

Location:

Name(s) of Evaluation Team:

MARKETS II Team and Members Interviewed:

Consent Form Signed:

A. Increasing Availability of Financial Resources

1. Has the level of financial resource available for target rural groups changed since the inception of MARKETS II? If yes, what are the responsible factors?
2. How does MARKETS II assess the farmers' level credit worthiness? Has their level of credit worthiness improved over the past three years? If yes what are the contributing factors? If no, why?
3. What three topmost constraints do farmers' groups or value chain groups face in accessing financial resources?
 - a. -----
 - b. -----
 - c. -----
4. Have these constraints been resolved? If yes, what are the contributing factors? If no, what are the reasons?
5. What innovative approach has MARKETS II implemented to facilitate access to financial resources by farmers groups and value chain groups?
6. How did MARKETS II enhance the capacities of commercial banks, microfinance institutions, and MFBs to increase lending to the rural and agricultural sectors?
7. What is your assessment of the performance of the MFI and MFBs in delivering credit to farmers, groups, and value chain groups?

F.1.7 Key/Group Informant Interview Guide – Sub-Contractor (Winrock International)

Name(s) of Evaluation Team Member(s):

Name(s) of Winrock International Staff Interviewed:

Date:

Location:

1. Please provide the period of time over which your organization worked with MARKETS II.
2. Please describe the specific expertise you provided the project MARKETS II in each of the following subject areas, disaggregated by site, and if applicable, value chain:
 - a. Development of water and irrigation systems.
 - b. Rehabilitation of water and irrigation systems.
 - c. Promotion of sustainable water and soil management.
3. If you conducted any training (e.g., training of trainers, field agents, extension staff, and/or farmer organizations), please describe the methodology you employed (if different for each of the three subject areas above, please provide separate descriptions). Again, disaggregate by site, and if applicable, value chain.
4. If you conducted any monitoring and/or evaluation of the effectiveness of the techniques you provided, please describe what went well, what did not go well, and what you would do differently. Again, please separate according to the three subject areas above, and provide an explanation for your response. If possible, disaggregate your response by the different project sites/value chains in which you worked.
5. If you interviewed any of the farmers/farmer's organizations with whom you worked regarding their experience with the techniques provided (including any problems they encountered in implementing the techniques, as well as those with which they were most/least satisfied), please provide the outcome of/findings from these interviews. If possible, please disaggregate by both project sites and sex of those interviewed.
6. Compared to other projects for which you have performed similar services, how would you rate your experience in working with MARKETS II: Excellent Good Average
Below average Poor
7. Kindly explain the reason(s) for your response above.

F.1.8 Key/Group Informant Interview Guide – Sub-Contractor (Other Sub-Contractors Excluding Winrock International and Making Cents International)

Date:

Location:

Name(s) of Evaluation Team:

Name(s) of Organization and Members Interviewed:

Consent Form Signed:

I. Public-Private Partnerships

- a. What results of MARKETS II can be attributed to its PPP model? This will be differentiated by size—such as small sub-contractors, large sub-contractors, or government alliances. (Make note of which category each interviewee falls into.)
 1. In which partnership arrangement(s) did you participate?
 2. What is your general thought about the PPP approach of the MARKETS II program?
 3. In what ways do think this approach is different from previous sub-contracting arrangement?
 4. What MARKETS II partnership arrangements are you familiar with? Probe:
 5. What has changes in your activity under the PPP approach? Probe: outcome, timelines, approvals, strategy, and direction.
- b. To answer the question “What is the value-added of partnering rather than merely sub-contracting/grants?”
 1. What are the successes and challenges of the new partnering arrangement? Probe:
 2. What are the lessons learned, best practices, and the corresponding recommendations for improving the efficiency and effectiveness of the PPP?

Effect of the PPP on:	Positive Aspects/Benefits	Challenges
Managerial Operations		
Infrastructure Development		
Skills Development		
Access to Input Markets		
Contract Arrangement		
Alternative and Innovative Financing Arrangement		
Markets for Output		
Productivity		
Extension Service Delivery Mechanism		
Nutritional Security		

II. Sustainability

- a. To answer the question “How did the organizational capacity building work affect the sustainability of partner organizations in PPPs?”
 1. Who was trained in the public sector to develop and lead public-private alliances?

2. How was the information used for program management and improvement?
 3. To what extent were the management structures, administrative support, and partnerships effective?
 4. Was training of partner staff in communication skills and dissemination of knowledge to producers and other industry participants effective, and how was this measured?
 5. Were the training modules and other demonstration kits well distributed and generally available to trainee/personnel undertaking the training? Probe: Was the proper use of kits monitored?
 6. How well resourced is/are the training center(s) now to continue its work?
- b. To what extent are lasting results reaching the intended beneficiaries?
1. As key stakeholders in the implementation of the MARKETS II project, we are interested on your views on: i) the relevance of the MARKETS II project; ii) perception of impact; iii) the lessons learned from your participation or implementation activities of MARKETS II; and iv) sustainability.

Issue/Questions	What has gone well?	What could be improved?	How could it be improved?
Relevance of MARKETS II to problem being addressed: i) Low productivity ii) Weak Business Culture iii) Lack of Market Opportunities			
Overall outcome of the MARKETS II project on reaching the intended beneficiaries with respect to? (e.g., job creation, incomes, increased productivity, increased revenue, participation of women & youth, etc.)			
What are the lessons learned from your participation in MARKETS II as a Collaborator or Partner?			
Perception on the sustainability of the MARKETS II after funding			

2. If the program were continuing, or a new program started now, what would be the top three recommendations you would make for the next MARKETS II Program?
 - a.
 - b.
 - c.
3. Is there anything else you would like to tell us about your work or overall about the MARKETS II Program?

F.2 Focus Group Discussion Guides

F.2.1 Focus Group Discussion Guide – MARKETS II Assisted Farmers and Farmer Organizations

Date:

Location:

Name(s) of Evaluation Team:

Name(s) of Farmer/Farmer Organization:

Number of Men:

Number of Women:

Age Range of Group:

Consent Form Signed:

Note: If interview is conducted in/near fields where the crop(s) of interest are growing, ask first to have a short walk around the field to assess overall crop health, and note any problems. Take photographs where appropriate.

Introduction: Explain who you are, why you would like to interview the farmer/group, reinforcing both the confidentiality of the information they provide, as well as the fact that you are **not** visiting them for the purpose of preparing a new project from which they might assist.

Overall general results of MARKETS II Assistance

1. Did you produce this crop^{12 13} before MARKETS II came along to assist you? Yes No
2. If yes, could you please tell us when and how the project helped you (or not) to improve productivity (please specify which, e.g., improved seeds, better pest and disease management):
 - a. New production techniques:
 - b. New technologies:
 - c. *New inputs:
 - d. *Improved pest and disease management, including weeds:
 - e. *Improved harvest/postharvest handling (including processing):
 - f. *Improved storage:
3. Have you been able to increase the income you get from this crop and/or better feed your family? Yes/Income No/Income Yes/Feed family No/Feed family
4. Do you now produce so much that it is difficult for you to sell/consume all the harvest before it becomes inedible (e.g., due to insect/disease infestation)? Yes No
5. If yes, what do you do with the surplus?
6. If you are using the new tools, techniques, you learned from MARKETS II, are these readily available on the local market:
 - a. Seeds: Yes No
 - b. Fertilizer: Yes No
 - c. Tools: Yes No

- d. Drip irrigation replacement parts: Yes No
 - e. Postharvest handling equipment, e.g., threshers: Yes No
 - f. Special storage tools, e.g., PICS bags: Yes No
 - g. Other (please list and indicate if available):
7. If these new tools/techniques are locally available, are you willing and able to pay the full price for these once the project has closed:
- a. Seeds: Yes No
 - b. Fertilizer: Yes No
 - c. Tools: Yes No
 - d. Drip irrigation replacement parts: Yes No
 - e. Postharvest handling equipment, e.g., threshers: Yes No
 - f. Special storage tools, e.g., PICS bags: Yes No
 - g. Other (please list and indicate if available locally):
8. Do you think you have mastered the new tools and technologies introduced by MARKETS II to be able to continue employing them without project assistance? Yes No
9. Has the project trained a local field agent who will be able to provide you with assistance if/when you need it? Yes No
10. If yes (there is a field agent available), will they provide advisory services for free? Yes No
11. If fee payment is asked for by the field agent, will you be able and willing to pay? Yes No
12. If MARKETS II provided you with technical assistance for more than crop, please list in order of priority which crop(s) you are most likely to continue producing, once the project has closed, and why

Questions Related to Farmers' Satisfaction with MARKETS II Interventions

- 1. Can you list from 4-6 of the activities conducted by the project to assist you which you found most useful? If possible, please indicate why.
- 2. Which aspects of the project's activities would you like to see repeated, should there be another project similar to MARKETS II?
- 3. Are there any of your most crucial needs for improving crop productivity, harvest/postharvest handling, processing, storage, and marketing which were **not** provided by MARKETS II which you would like to have received? Note: please focus on the **technical assistance**. For example, inadequate training on/supervision of your use of new techniques and technologies? Techniques and technologies which you did not find useful? To be excluded are materials (e.g., seeds, machinery) and direct distribution of finances that are **not** items you should have or would like to have received.
- 4. If there is no follow-on project to MARKETS II, do you believe you will continue to be successful in improving crop productivity and any improvements to the well-being of your household which resulted from MARKETS II? If not, why not?
- 5. Do you know of any farmers, not directly assisted by MARKETS II, who adopted techniques and/or technologies introduced by the project?
- 6. If so, could you provide us with information on how we might be able to talk to them?
- 7. If we cannot meet and talk to them, given time constraints as well as their own commitments, do you have any idea (approximate) of which techniques/technologies they adopted?

F.2.2 Focus Group Discussions Guide – Non-Direct Beneficiary Farmers and Farmer Associations

Towards answering the question “What evidence indicates that technologies and practices promoted by MARKETS II have been adopted by farmers who are not beneficiaries?”

Focus Group Discussion Guide NON Beneficiary Farmers	
Name of facilitator	
Stakeholder group	
State	
Volunteer(s)	
Date	
Number of participants	_____ Women _____ Men
Number of signed informed consent forms:	
Start time	
End time	

1. Have a **list of technologies and practices** promoted by MARKETS II. Provide separate answers for different value chains, if more than one is involved. Similarly, if technique/technology is applied to a value chain other than the seven promoted by MARKETS II, please make note.
2. Which of the following technologies and practices have you used on your farm last year?
3. How long have you been using the technologies and practices?
4. Where did you get information of the technologies and practices you used?
5. What is/are the source(s) of the technologies and practices that you used on your farm?
6. What is the performance of the technologies and new practices? Provide separate answers for the different value chains.
a) Excellent b) Good c) Average d) Poor
7. Do you expect that you will continue to apply these new technologies and practices (or components of same)? If not, please explain why.

F.2.3 Focus Group Discussion Guide – Partners/Collaborators Who Are Not Farmers/Farmers’ Organizations

Date:

Location:

Name(s) of Evaluation Team:

Name(s) of Organization and Members Interviewed:

Consent Form Signed:

1. How long have you known and worked with the USAID MARKETS II project?
2. What was your role in one or more specific projects/value chains? (Specify according to project/value chain.)
3. A major overall objective of the MARKETS II project was to *increase smallholder income from agricultural development promoted through enhanced private sector participation and investment*. From your experience with the project, what would you identify as the successes in meeting this objective and what would you identify as issues that hindered this objective from being met?

Activity/Issue	What has gone well?	What could be improved?	How could it be improved?
MARKETS II COMPONENTS			
Producers' Capacity Developed and Organizations Strengthened			
Increased Access to Agricultural Inputs (seeds, fertilizers, chemicals, etc.)			
Technology Generation and Deployment			
Water and Soil Management			
Improved Access to Agricultural Finance and Business Development			
Increase Women' Access and Control of Productive Assets			
Production Engagement with the Private and Public Sectors			

Probe: Was the MARKETS II project sustainable?

4. From your experience, what were some of the overall successes of the MARKETS II project, and what were the highlights of your specific work? Probe: How effective was the management structure? Has the project been effective in adjusting activities to reflect changes to the environment in terms of the identified challenges?
5. From your experience, what were the gaps in the overall MARKETS II project? Probe: What helped or hindered your ability to do your work given the MARKETS II project's design and objectives?

6. What is your assessment of the following MARKETS II hypothesis/approach, that; “If we promote the adoption of improved technologies, and increase use of quality inputs for productivity, and link farmers, especially smallholders, to processors for value addition and end-users, creating jobs in rural areas and strengthening businesses, complemented by efforts to improve nutrition, the enabling environment for private sector participation in agricultural, trade, transport, and environmentally sustainable energy systems, with targeted support to enable the participation of vulnerable households, these interventions will increase rural incomes.”

Component of Approach	Positive Aspects/Benefits	Challenges	Opportunities
Good Agronomic Practices			
Farming as a Business			
Adoption of Improved and Appropriate Technologies (including agro-inputs and financing)			
Enhance Linkages of Farmers with Value Chain Off-Takers (processors)			
Significant Inclusion of Women and Youth in the Value Chains			
Productive Engagement with the Private and Public Sectors			

7. As key stakeholders in the implementation of the MARKETS II project, we are interested on your views on: i) the relevance of the MARKETS II project; ii) perception of impact; iii) the lessons learned from your participation or implementation activities of MARKETS II; and iv) sustainability.

Issue/Questions	What has gone well?	What could be improved?	How could it be improved?
Relevance of MARKETS II to problem being addressed: i) Low productivity ii) Weak Business Culture iii) Lack of Market Opportunities			
Overall outcome of the MARKETS II project on reaching the intended beneficiaries with respect to? (e.g., job creation, incomes, increased productivity, increased revenue, participation of women & youth, etc.)			
What are the lessons learned from your participation in MARKETS II as a Collaborator or Partner?			

Issue/Questions	What has gone well?	What could be improved?	How could it be improved?
Perception on the sustainability of the MARKETS II after funding			

8. If the project were continuing, or a new project started now, what would be the top three recommendations you would make for the next MARKETS II project?
 - a.
 - b.
 - c.
9. Is there anything else you would like to tell us about your work or overall about the MARKETS II project?