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FOOD AND ENTERPRISE DEVELOPMENT (FED) PROGRAM FOR LIBERIA

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Photo Caption: Minister of Agriculture Dr. Moses Zinnah, with former USAID FED Chief of Party Agnes Luz at his side, signs the seeds, pesticides and fertilizer regulations at the FED Knowledge Sharing event on December 17, 2015.

DISCLAIMER

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Acronyms

AEDE	Agency for Economic Development and Empowerment
APDRA	Association Pisciculture et Development Rural en Afrique
AVTP	Accelerated Vocational Training Program
AYP	Advancing Youth Project
BSTVSE	Bureau of Science, Technical, Vocational and Special Education
BWI	Booker Washington Institute
CARI	Center of Agriculture Research Institute
CAHW	Community Animal Health Worker
CBF	County Based Facilitator
CILSS	Permanent Interstates Committee for Drought Control in the Sahel
CoE	Center of Excellence
CYNP	Community Youth Network Program
DAI	Development Alternatives Inc.
DCOP	Deputy Chief of Party
ECOWAS	Economic Community of West African States
ECREP	Evangelical Children Rehabilitation Program
EMMP	Environmental Mitigation and Monitoring Plan
EO	Extension Officer
FtF	Feed the Future
FGD	Focus Group Discussion
FUN	Farmer Union Network
GAP	Good Agriculture Practices
GBCC	Grand Bassa Community College
GCAP	Green Coast Agricultural Program
GPS	Global Positioning Systems
IBEX	Investing in Business Expansion Liberia
IFDC	International Fertilizer Developmental Center
IITA	International Institute for Tropical Agriculture
IP	Implementing Partner
IQC	Indefinite Quantity Contract
ISFM	Integrated Soil Fertility Management
KRTTI	Kakata Rural Teachers Training Institute
LABEE IPG	Liberia Agriculture Business Enabling Environment Inter-Agency Policy Group

LAUNCH	Liberia Agriculture, Upgrading Nutrition & Child Health
LCCC	Lofa County Community College
LIFE	Livelihood Improvement for Farming Enterprises
LIPAS	Liberia Integrated Professional Agriculture Service
LMEP	Liberia Monitoring and Evaluation Program
LNGO	Local Non-Governmental Organization
MFI	Micro Finance Institution
MIS	Market Information Systems
MoA	Ministry of Agriculture
MoCI	Ministry of Commerce and Industry
MoE	Ministry of Education
MoHSW	Ministry of Health and Social Welfare
MoP	Muriate of Potash
MoU	Memorandum of Understanding
MSME	Micro, Small and Medium Enterprise
NDA	National Diploma in Agriculture
NCCC	Nimba County Community College
NIC	National Investment Commission
PERSUAP	Pesticide Evaluation Report and Safer Use Action Plan
PIDS	Performance Indicator Database System
PMP	Performance Management Plan
PUA	Peri-Urban Agriculture
R&RF	Rights & Rice Foundation
RFTOP	Requests for Task Order Proposals
RRA	Rapid Rural Appraisal
TAMIS	Technical Administrative Management Information System
TSP	Triple Super-Phosphate
TVET	Technical, Vocational Education and Training
UDP	Urea Deep Placement
UL	University of Liberia
USADF	United States African Development Foundation
USAID	United States Agency for International Development
VET GOV	Veterinary Governance in Africa
WAAPP	West Africa Agriculture Productivity Program
WAFP	West Africa Fertilizer Project
WASP	West Africa Seed Project
WFP	World Food Program

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Background

The Food and Enterprise Development (FED) Program is USAID's flagship Feed the Future (FtF) Initiative in Liberia, launched in September 2011. USAID FED uses an all-inclusive strategy incorporating Micro, Small and Medium Enterprise (MSME), farmers, processors, suppliers, women, and youth while partnering with the Government of Liberia (GoL) and local civil society to achieve food security.

USAID FED is increasing food availability, utilization, and accessibility by building an indigenous incentive structure that assists agricultural stakeholders in adopting commercial approaches.

This incentive structure is built upon:

- Improved technology for productivity and profitability;
- Expanded and modernized input supply and extension systems;
- Commercial production, marketing, and processing;
- Enterprise services; and
- Workforce development.

USAID FED works with the Ministry of Agriculture (MoA), civil society, and the private sector in providing communities access to agricultural inputs, extension services, nutrition messages, processing services, market information, transportation, credit, agro-business education, training, and business development services.

As USAID FED enters its fifth and final year of operation, it is expanding market linkages leading to substantial increases in income and job opportunities. USAID FED is also significantly boosting the production, processing, marketing and nutritional utilization of rice, cassava and vegetables, as well as enhancing the productivity of goat farming in the counties covered by the program.

These initiatives are being carried out in Bong, Lofa, Nimba, Grand Bassa, Montserrado, and Margibi counties. USAID FED focuses on these counties because they are situated along regional development corridors that are crucial in promoting intra and inter-county commerce. These growth corridors are expected to improve food availability and access for all Liberians.

USAID FED's methodology is market-led and value chain-driven, and committed to building indigenous capacity building with a specific focus on Liberia's women and youth.

USAID FED is implemented by five partners: Development Alternatives, Inc. (DAI), Winrock International, International Fertilizer Developmental Center (IFDC), Louisiana State University (LSU), and The Cadmus Group.

Executive Summary

A. Progress toward FY2016 and life-of-project targets

To date, USAID FED has exceeded the life-of-project (LOP) targets on ten of its 25 indicators as of the end of the first quarter of the project's fifth and final year of implementation. In addition, results-to-date compared to LOP targets on another eight indicators have reached an 81 percent or better level of achievement, with another one at 71 percent. As such, 19 of the 25 FED LOP targets have already been achieved, or should easily be in the time remaining.

The remaining indicators that fall short of LOP targets include number of jobs attributable to FED interventions (65 percent achieved), numbers of profitable firms (60 percent), value of incremental sales (56 percent), number of MSME's receiving business development services (also 56 percent), total increase in milling capacity (33 percent), and percentage reduction of post-harvest losses (0 percent).

We expect the first four of the latter set of indicators to be fully achieved by the end of the project given increased level of intensity in the second, third and fourth quarters of FY2016. In particular, the value of incremental sales should increase dramatically since production in all four value chains that took place in FY2015, especially rice and cassava - considering that the harvests will not be concluded until March 2016, will continue to be sold well into next quarter and therefore could not be captured in the data presented in this reporting period.

Of particular concern are the two indicators with the lowest levels of achievement to date: total increase in milling capacity and reduction of post-harvest losses. FED expects significantly increased milling capacity in the data reported in the next quarter, given that nine of the total 19 business hub collection and processing centers are scheduled to come on line in the next two months. These will almost double the current levels of milling capacity.

Several interventions recently initiated or ready for implementation in the next reporting period will also result in reduced post-harvest losses. As mentioned, nine new rice business hubs will come into service that will almost double storage and milling capacity for rice. Three cold stores in Buchanan, Yekepa, and Montserado are now in operation which will reduce vegetable post-harvest losses, as will charcoal and zero energy coolers promoted by the project. The introduction of tuk-tuks will reduce the time required to transport produce from farm-to-market. Finally, a survey to assess post-harvest losses conducted in FY2015 did not include cassava, so the extent to which FED has impacted post-harvest losses in cassava has not been captured. A follow-up survey to include cassava will be conducted in the next reporting period.

The following table presents progress-to-date toward USAID FED's FY2016 and LOP targets:

FY-16 Quarterly Indicators Progress Report Table								
No	FtF No.	Indicator	LOP Target	FY16 target	FY16 Quarter I Actual	FY16 Target % Accomplished	Cumulative Year 1-5	LOP Target %
2	4.5.2-13	Number of rural households benefitting directly from USG interventions	102,679	112,350	84,794	75%	181,185	176%
3	4.5.2-5	Number of farmers and others who have applied new technologies and management practices as a result of USG assistance	114,088	116,800	88,152	75%	176,718	155%
4	4.5.2-2	Number of hectares under new technologies or management practices as a result of USG assistance	20,201	20,573	304	1%	17,527	87%
5	4.5.1-28	Hectares under new or improved/rehabilitated irrigation or drainage services as a result of USG assistance	6,370	6,787	155	2%	5,942	93%
6	4.5.2-11	Number of private enterprises, producers organizations, women's groups, trade and business associations and community-based organizations (CBOs) receiving USG assistance	2,750	5,627	4,351	77%	6,925	252%
7	4.5.2-42	Number of private enterprises, producer organizations, women's groups, trade and business associations and community-based organizations (CBOs) that applied new technology or management practices as a result of USG assistance	2,750	5,627	4,351	77%	6,925	252%
8	4.5.10	Total increase in installed storage capacity (M3)	12,267	5,242	-	0%	9,940	81%
9	4.5.2-23	Value of incremental sales (collected at the farm level) attributed to FtF	\$ 17,655,964.60	\$ 13,786,344.00	\$ 1,386,454.45	10%	9,822,902	56%
10	4.5.2-38	Value of new private sector investment in the ag sector or food chain leveraged by FtF implementation	5,178,961	2,585,200	223,715	9%	4,501,640	87%
11	4.5.2	Number of jobs attributed to FtF implementation	6,702	1,649	-	0%	4,367	65%
12	4.5.2-12	Number of public-private partnerships formed as a result of FtF assistance	3971	1,052	-	0%	3,551	89%
13	4.5.1-24	Number of agricultural and nutritional enabling environment policies completing the following processes/steps of development as a result of USG assistance	14	6	-	0%	13	93%
14	4.5.2-37	Number of MSMEs, including farmers, receiving business development services from USG-assisted sources	43,917	117,892	35	0%	24,787	56%
15	4.5.2-30	Number of MSMEs, including farmers, receiving USG assistance to access loans	21,955	15,513	5,779	37%	17,964	82%
16	4.5.2-43	Number of firms (excluding farms) or Civil Society Organizations (CSOs) engaged in agricultural and food security-related manufacturing and services now operating more profitably (at or above cost) because of USG assistance	629	252	-	0%	377	60%
17	4.5.2-6	Number of individuals who have received USG supported long-term agricultural sector productivity or food security training	2	2	2	100%	4	200%
18	4.5.2-7	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	201,308	51,689	-	0%	171,553	85%
19	1.1.1	Number of farmers and others with access to improved planting materials	118,138	182,480	-	0%	83,572	71%
20	1.1.2	Number of individuals receiving nutrition messages within agricultural programs as a result of USG assistance	88,133	23,030	-	0%	98,391	112%
21	1.3.1	Total increase in install milling capacity for crop processing (MT)	60,483	44,000	-	0%	20,083	33%
22	1.3.2	Number of households with improved diet diversity as a result of USG assistance	17,627	26,803	-	0%	22,335	127%
23	1.3.3	Percentage reduction in Post-Harvest Losses (for rice, cassava and vegetables)						
		rice	15%	2	-	0%	1%	5%
		cassava	15%	10	-	0%		0%
		vegetables	15%	3	-	0%	1%	5%
24	2.2.1	Total amount of financing (cash and in-kind) accessed by farmers and agribusinesses through formal, informal, and embedded services.	1,454,481	1,504,456	\$264,775.00	18%	\$1,584,930	109%
25	3.2.1	Number of individuals who have received training on management and leadership	14,325	23,048	-	0%	\$22,891	160%
26	3.2.2	Number of students and Faculty/Administration benefitting from improved academic facilities and programs	4,700	4,060	-	0%	\$6,916	147%

B. Summary of USAID FED Accomplishments: 2011-2015

I. Value Chains

It is important to note that value chains for staple foods in Liberia were extremely undeveloped when FED initiated implementation in 2011. In four short years since that time, FED has developed commercial value

chains for rice, cassava, horticulture and goats that have led to increased food security and incomes. What follows are some key FED achievements in the four value chains:

Rice: Improved technologies promoted by FED have contributed to increased productivity per unit area from 1.2 MT/ha of paddy rice in 2012 to an average of 3 MT/ha in 2015. Ten rice business hubs have been established with an annual milling capacity of 7,800MT, with nine more coming on line in early-2016. These hubs are equipped with rice mills, de-stoners, threshers, drying slabs, power tillers and storage areas. FED investments helped establish Liberia's first industrial rice mill, FABRAR Liberia, which has a current annual milling capacity of 7,500 MT. These cumulative investments have directly benefited approximately 50,000 farmers who have produced and harvested over 40,000 MT of paddy rice on 12,000 hectares of upland and lowland areas over the last three years. The project has achieved cumulative incremental sales of over 9,000 MT of paddy rice valued at US\$3.73 million over the last three years with a projection of incremental sales of 27,000 MT valued at US\$10 million in FY 2016. Project interventions have also led to the emergence of successful aggregators/integrators such as John Selma in Lofa County, who provide embedded services such as pre-financing and market access for farmers. The integrator purchases paddy from farmers which he mills and supplies industrial processors like FABRAR Liberia, other institutional buyers and community markets.

Cassava: FED's introduction of improved production practices and high yielding cassava varieties has resulted in dramatic productivity increases per unit area, from an average of 4MT/ha in 2013 to 18 MT/ha by 2015. Thirty-three cassava processors, including 25 micro-processors based in the counties, received FED technical and financial assistance to upgrade processing capacity from 7,000 MT to 22,000 MT of cassava tubers. FED interventions have directly benefited more than 25,000 cassava growers now producing cassava tuber on 3,500 Ha. These efforts have resulted in cumulative incremental sales of US\$3.6 million over the past three years. These results are projected to increase to 35,000 farmers producing 135,000 MT of tubers on over 5,000 ha of land by the end of FY2016, with incremental sales projected to increase to US\$3.5 million. FED is also working closely with the Ministry of Commerce and Industry and the Liberia Bakers Association to promote legislation requiring incorporation of 10% cassava flour in baking mixes, which will result in increased production incentives and market opportunities. FED is also supporting a small cassava processor, Falama Inc., to expand its current flour mill to a significantly larger industrial capacity.

Horticulture: The introduction of improved production technologies and practices by FED has led to higher quality and diversity of both local and high value vegetables grown in Liberia. Local vegetables include bitter ball, native okra and chili peppers, while high value vegetables include lettuce, cucumbers, tomatoes, lady-finger okra, cabbage, string beans and sweet peppers. Successful interventions include construction of 40 rain shelters allowing FED to demonstrate modern vegetable production technologies during the rainy season, as well as the introduction of 188 water pumps and drip irrigation kits to help farmers expand vegetable production during the dry season. As a result of these and other interventions, vegetable production increased from 3.6MT/ha in 2013 to 6.2 MT/ha in 2015. More than 5,500 vegetable growers have benefitted, including 500 youth farmers from 25 groups in Margibi and Montserrado Counties and six vegetable trader associations. Together, these producers will generate a projected \$2 million in incremental sales through sales of 2,000 MT on 360 Ha by the end of FY2016. FED also provided financing for three cold storage facilities through cost-sharing arrangements with two major Liberian vegetable buyers.

Goats: Livestock (sheep and goats) slaughtered and sold in Liberia are generally imported from neighboring countries. The combined interventions of improved goat herd management practices that include proper housing, through construction of 540 shelters, and proper veterinary care have contributed to an increase in weaning rates from 54% to over 90%. FED has trained 360 community animal health workers (all women) who provide fee-based veterinary services at 180 goat production sites. These efforts have resulted in increased herd size from 850 animals in 2013 to 16,665 animals by 2015. A total of 3,900 direct beneficiaries and 4,400 indirect beneficiaries from satellite communities have benefitted from FED livestock interventions. By the end of 2015, FED-supported farmers had sold 8,000 goats resulting in incremental sales of just under US\$500,000 as a result of strengthened commercial linkages and marketing events facilitated by FED between traders and goat farmers at the county level.

2. Enabling Environment for Private Sector Growth

Policy: Except for an executive order signed annually by the President to waive duties on imported farm inputs, there existed no government policies or regulations for farm inputs or importation of major staple foods prior to FED. Project efforts have supported the Ministry of Agriculture to adopt ECOWAS seed, fertilizer, and pesticide policies, and to incorporate these ECOWAS regulations into Liberian law. The policies and regulations recommended by FED were validated by stakeholders and formally approved by the Minister of Agriculture in December, 2015. The next step is for the GoL to engage the legislative process so that these policies and regulations are incorporated into law, to include the establishment of institutions that will enforce the laws. These efforts are crucial to Liberia's eligibility for membership into the World Trade Organization allowing for access to international markets. FED also provided technical support to the Ministry of Commerce and Industry on preparation of rice importation policy and regulations that are expected to be presented to the cabinet in early-2016.

Access to Finance: FED has established 573 Village Savings and Loans Associations (VSLAs) benefitting close to 10,000 small scale farmers, most of whom are women. These VSLA's have generated US\$450,000 in capital that was used to provide US\$ 260,000 in loans to 2,000 members for investments in the agricultural sector and small businesses in 2015. FED also supported 10,000 MSMEs to access US\$930,000 in financing through formal, informal and embedded services to invest in the agricultural sector in 2015.

Youth: FED has supported 30 youth entrepreneurs to purchase power tillers through cost-share arrangements to provide fee-based land tillage services to lowland rice growers. Similar cost-sharing arrangements were used to purchase 47 tuk-tuk motorbikes by 36 youth entrepreneurs to provide fee-based, farm-to-market transport services for rice, cassava, vegetables and other farm produce.

3. Human Resource Technical and Management Capacity Building

Little progress toward rebuilding community colleges and vocational training centers had been realized after the war due to inadequate resources to support vocational education in Liberia. No standardized vocational agriculture curriculum existed when FED began its activities in 2011, and science labs for soil testing and analysis and learning resources in libraries were practically non-existent. In response, FED has established vocational Centers of Excellence (CoEs) in agriculture at four prominent educational institutions and introduced a regionally-recognized National Diploma in Agriculture (NDA) curriculum. FED also rehabilitated classrooms

that were converted into science labs equipped with soil analysis instruments, has developed libraries through provision of agricultural textbooks and internet connections, and established farm demonstration sites for students at each of the CoEs. FED has also provided short-term training to almost 23,000 in management and leadership, and supported two teachers at the CoEs for long-term degree training. In 2015, 812 out of 3,960 students enrolled at the four CoEs are in the NDA program.

C. Highlights of this reporting period include the following activities:

- Two modern science laboratories inaugurated: The labs support the curriculum for the National Diploma in Agriculture (NDA) at Nimba County (NCCC) and Lofa County Community Colleges (LCCC). The NDA program is Liberia's recently unveiled, market-driven 2-year vocational agriculture program supported by USAID, which prepares Liberia's youth for careers in agriculture. The NDA offers core courses in agriculture such as crop production, irrigation, soil science, and animal husbandry as well as skills in entrepreneurship, leadership, and communications. In addition to providing practical training to students, the labs offer soil testing services to farmers in adjacent communities and other institutions on a fee basis to help sustain the facilities. Each of the two community colleges housed the labs in buildings at their respective locations. USAID FED renovated and outfitted the labs, which included the purchase and installation of state of the art laboratory equipment.
- Cold storage facility inaugurated: Through a cost-share with ROSNA Services, Ltd, this refrigerated facility will enhance market linkages and increase vegetable farmer incomes in Yekepa district by reducing post-harvest losses and enabling farmers to supply more of their produce to ROSNA and other potential buyers. FED funds were used to supply the refrigerated container, while ROSNA financed the infrastructure housing the container and the generator to power it. The facility is administered by ROSNA on land owned by that company.
- Development of rice policy, rice importation guidelines, and rice development fund: These efforts are designed to create an environment where consumers have reliable and affordable rice supply. The policy establishes conditions for control and management of rice reserves and the appropriate interventions and legislation supporting enhanced domestic production. In addition, the policy strives to strike the balance between competing needs for price affordability and stability while enhancing domestic production. The development of the rice development fund is critical to ensuring investment capital is available for the implementation of recommendations emerging from these policies. This is a joint effort between USAID, DAI, and the Minister of Commerce and Industry (MoCI) who assumes the leadership position.
- Support for the Agenda for Agricultural Transformation in Liberia (AATL): The African Development Bank has been tasked by the President to draft the AATL. This initiative is designed to provide agricultural inputs to 450,000 farmers over the next two years to boost food security and income generation through increased local production. It would support FED's four value chains as well as others including rubber, cocoa, poultry, etc. The African Development Bank (ADB) consulted FED extensively in the design of the proposal, soliciting advice and guidance on its structure and substance. ADB presented the proposal to the President during this reporting period, with FED's recommendations prominently represented. The proposal is still in draft form with limited distribution and considered confidential at this time. The MoA is driving the AATL.
- Facilitated buyer-seller relationship between FABRAR Liberia and Selma Agricultural Corporation: John Selma is a private aggregator and processor with a large network of paddy suppliers in Lofa County.

FED played an important intermediary role in helping to establish this market linkage, which resulted in a contract executed in November of this reporting period in which Selma agreed to supply 280 MT of milled rice to FABRAR for \$168,000. FED continues to support Selma in his efforts to secure trading capital from the Development Credit facility at AfriLand Bank. This capital is crucial to Selma's ability to purchase paddy in the upcoming season, but the stringent requirements to access such credit are prohibitive. Additionally, John Selma was named Liberia's Man of the Year by the Daily Observer Newspaper for his efforts to develop rice production in Lofa County. USAID FED was prominently mentioned in the article.

- Strengthening market linkages: FED staff met with representatives of the two largest importers of rice in Liberia during this reporting period, SWAT and UCI, to assess their interest and willingness to procure locally-procured paddy and/or milled rice. Both agents expressed serious interest given FED's access to tens of thousands of rice producers spread across a wide geographic region. However, the agents expressed concerns about whether farmers would be willing to sell their paddy at prices attractive to them and which are competitive with imported rice. In response, FED is consulting with the rice business hubs so that they better understand the need to establish pricing based on what the market will bear, as well as the benefits of establishing long-term relationships with such large potential buyers. Technical assistance to the rice business hubs will be an ongoing activity for FED through the remainder of the project, since such relationships are crucial to sustaining FED impact over the long-term.
- Support to Centers of Excellence (COE): FED mobilized and dispatched five consultants to support the four partner COE institutions: the Booker Washington Institute (BWI), the Grand Bassa Community College (GBCC), NCCC and LCCC. Training for college faculties in agronomy, soil science and grant proposal writing was conducted, as were assessments of performance management, strategic planning, finance, and enterprise development systems of the four institutions. These interventions were designed to strengthen faculty capacity to implement the NDA curriculum as well as develop skills of top management to identify and pursue funding sources for sustainability of the COEs. Thirty-two faculty, senior administrative staff and students of the four institutions participated in the training and assessments. Additionally, QI saw a number of other achievements including the successful procurement of 25 goats and training of two goat technicians at LCCC in November. In December, FED representatives witnessed NCCC's first graduation ceremony on the main campus of the college, in which 167 graduates received their AA degrees in various agricultural disciplines.
- Knowledge Sharing Event: The theme of this event, which took place in December, was *USAID FED: Breaking Barriers to Food Security in Liberia*. The highlight of this event was the signing of the new seed, fertilizer, and pesticide regulations into law by the MoA, Dr. Moses Zinnah. These regulations were developed and drafted with USAID FED support. The departing FED Chief of Party, Agnes Luz, also delivered extension program materials and soil fertility maps developed by the program to Dr. Zinnah. A summary of results and impact of USAID FED through the end of FY2015 was presented, as well as the FY2016 work plan. The USAID Director, Tony Chan, and high-ranking representatives of the GoL also delivered remarks at the event.
- Fifteen hectares of lowland rice fields in Foyah District, Lofa County harvested: This activity was initiated by the Mayor Farmers Association (MFA) with support from USAID FED. The MFA comprises 100 farmers (25 males and 75 females). The organization was established in 2013 to provide economic empowerment for community members in Foyah District.

- Participation in World Food Day at CARI in Suakoko, Bong County: This event was hosted by MoA with the participation of many development partners including WFP, FAO, CARI, and ZOA. World Food Day takes place every year in Liberia on November 14. This year's topic was "Social Protection and Agriculture: Breaking the Cycle of Rural Poverty," underlining the role social protection plays in reducing chronic food insecurity and poverty by ensuring direct access to food or the means to procure food. USAID FED brought farmers from Bong County representing the four value chains who sold rice, vegetables, goats, and cassava at the event. The project also displayed a tuk-tuk which attracted considerable attention since it is an idea new to Liberia for bringing products from farm-to-market.
- Several special surveys conducted during the reporting period revealed the following:
 - FED-supported rice farmers increased production by 16 percent since 2012 compared to 4 percent for non-FED supported farmers. Sales of rice for the same time period increased by 7.1 percent for those farmers supported by FED, compared to an increase of only 0.4 percent for those non-FED supported farmers.
 - 64 percent of FED beneficiaries have received nutrition messages, exceeding the target of 44 percent.
 - 57 percent of FED beneficiaries from FY2014 have improved dietary diversity; no target was established for this measure.
 - 75 percent of goat farmers have adopted USAID FED technologies after being introduced to them. This includes technologies such as use of goat shelters, deworming, and consultations with animal health workers. With the introduction of goat shelters by the project in 2014, participating farmers have realized a 38.5 percent increase in the number of goats sold and in overall consumption of goat meat.
 - 502 MT of paddy rice were sold with a value of US\$175,734 among FED-participating farmers during the reporting period. This represents three percent of the total harvested volume of paddy for the period. The average price was US\$354 per MT. The rice harvest began in November and runs through March, thus FED expects a significant increase in both total harvest and sales in the next quarterly report.
 - 8,020 MT of cassava tuber were sold with a value of US\$440,361 during the reporting period. In total, 27,103 MT of the FY2014 cassava crop has been sold for US\$1,409,779. This represents 51 percent of the sales target, which we expect will realize a significant increase with cassava harvested through March, 2016. Households are retaining about 10 percent of the harvest for household consumption.

Component One: Increase Agricultural Productivity and Profitability

Task 1A: Increased Productivity and Profitability of the Rice Value Chain

FY15 Rice crop harvest and sales

In Q1, a total of 19,217 MT of FY15 paddy rice crop was harvested from 6,800 ha of both upland and lowland (Table 1 and 2). This includes areas supported in FY13, FY14 and FY15, and represents 54 percent of the anticipated production of 35,000 MT. The average yield per ha for upland and lowland was 2 MT and 4 MT respectively. Harvesting will continue until March 2016.

Table 1: Harvests of FY15 Upland rice paddy

County	Upland Ha established (FY13, FY14, FY15)	Anticipated harvest (MT)	Ha harvested in November	Volume harvested in November (MT)	Ha harvested in December	Volume harvested in December (MT)	Total Ha harvested YTD	Total Volume harvested YTD (MT)	Area pending harvest
Lofa	665	1,330	665	1,332	0	0	665	1,332	0
Nimba	292	583	292	583	0	0	292	583	0
Bong	5,348	10,695	2,030	4,046	432	860	2,462	4,906	2886
Grand Bassa	824	1,649	126	252	116	232	242	484	582
TOTAL	7,129	14,257	3,113	6,213	548	1,092	3,661	7,305	3,468

Table 2: Harvests of FY15 Lowland rice paddy

County	Lowland Ha established (FY13, FY14, FY15)	Anticipated harvest (MT)	Ha harvested in November (MT)	Volume Harvested in November (MT)	Ha harvested in December	Volume harvested in December (MT)	Total Ha harvested YTD	Total Volume harvested YTD	Area pending harvest
Lofa	1,180	4,720	80	314	628	2,512	708	2,826	472
Nimba	1,351	5,406	63	252	777	3,104	840	3,356	511
Bong	2,731	10,924	260	1,041	1,279	4,479	1,539	5,520	1,192
Grand Bassa	126	505	10	42	42	168	52	210	74
TOTAL	5,388	21,555	413	1,649	2,726	10,263	3,139	11,912	2,249

In Q1, a total of 502 MT of paddy rice was recorded as sold for US\$175, 734 (Table 3). This represents three percent of the total harvested volume of paddy for the period. The average price was US\$354 per MT.

Table 3: Sales of FY15 rice paddy

County	Sales volume target (MT)	Sales value target (US\$)	Sales volume in November (MT)	Sales value in November (US\$)	Sales volume in December (MT)	Sales value in December (US\$)	Total Rice Sales Volume YTD (MT)	Total Rice Sales Value YTD (US\$)
Lofa	2,869	\$1,090,233	34	\$13,600	102	\$37,240	136	\$50,840

Nimba	2,555	\$970,938	0	\$0	2	\$724	2	\$724
Bong	12,004	\$4,561,507	205	\$68,992	10	\$3,454	215	\$72,446
Grand Bassa	1,478	\$561,782	0	\$0	150	\$51,724	150	\$51,724
TOTAL	18,906	\$7,184,460	239	\$82,592	263	\$93,142	502	\$175,734

Legume harvests and sales

In Q1, upland rice farmers harvested a total of 45 MT of cowpeas that were planted on 49 ha of demonstration fields for crop rotation (Table 4). These represent 195 percent of the potential yield expected from these planted areas. These are valued at US\$60,875 or US\$2.50 per kg in the market. Farmers are retaining the cowpeas for domestic consumption and for replanting in the follow on season.

Table 4: Harvests of Cowpeas

County	Area planted with Cowpeas in FY15 (Ha)	Expected Yields (MT)	Area harvested in November (Ha)	Volume Harvested in November (MT)	Area harvested in December (Ha)	Volume harvested in December (MT)	Area harvested YTD (Ha)	Volume harvested YTD (MT)	Area pending harvesting (Ha)
Lofa	24	11	14	26	2	2	16	28	8
Nimba	23	10	3	2	4	2	7	4	16
Bong	40	18	0	0	22	10	22	10	18
Grand Bassa	6	3	3	2	1	0	4	2	2
TOTAL	93	42	20	30	29	15	49	45	44

Improving productivity and profitability of upland rice

Technical assistance to FY13, FY14, and FY15 upland rice groups:

In Q1, USAID FED continued to provide technical assistance to the FY13, FY14, and FY15 upland rice farming groups through its field extension staff, and five contracted LNGOs. This technical assistance was primarily focused on harvest and post-harvest handling of their rice crop planted in FY15. The LNGOs will continue to provide technical assistance to these groups through March, 2016.

Support 5,250 new upland rice farmers to apply improved technologies on 750 hectares of new upland areas:

In Q1, USAID FED identified 5,250 beneficiaries (3,405 men and 1,845 women) to assist in opening new areas for upland rice production in FY16 (Table 5). This represents 100 percent of the targeted beneficiary number for upland rice. The women identified represent 35 percent of the total beneficiaries.



Figure 1: Upland rice farmers harvesting rice in Brooklyn Community, Jorquelleh district, Bong County.

Table 5: Upland rice beneficiary identification

County	Targeted Upland Rice Ha	Targeted Upland Beneficiaries	Beneficiaries selected in October			Beneficiaries selected in November			Beneficiaries selected in December			Total beneficiaries selected YTD		
			Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Bong	180	1,260	0	0	0	270	180	450	600	210	810	870	390	1,260
Nimba	240	1,680	0	0	0	825	785	1,610	50	20	70	875	805	1,680
Lofa	240	1,680	0	0	0	780	180	960	432	288	720	1,212	468	1,680
Grand Bassa	90	630	95	50	145	333	123	456	20	9	29	448	182	630
TOTAL	750	5,250	95	50	145	2,208	1,268	3,476	1,102	527	1,629	3,405	1,845	5,250

The verification and mobilization of these farmers can only take place upon approval of FED's request for a project no-cost extension that will allow activities to continue through September 2016, with close-out actions to begin the following month. Without this no-cost extension, USAID FED will be unable to implement upland rice production activities which are scheduled to start in May, 2016. This would constrain project ability to support 5,250 new beneficiaries who could potentially apply improved technologies on an additional 750 ha and produce another 1,875 MT of paddy rice valued at US\$713,000.

Expanding lowland rice production

Technical assistance to FY13, FY14, and FY15 lowland rice groups:

USAID FED continued to provide technical assistance to the FY13, FY14, and FY15 lowland rice farming groups through its extension staff, and five contracted LNGOs. This technical assistance was primarily focused on harvesting and post-harvest handling of their rice crop that was planted in FY15. The LNGOs will continue to provide technical assistance to these groups through March 2016.

Support 7,000 new lowland farmers to apply improved technologies on 1,000 hectares of new lowland areas:

In Q1, USAID FED identified 7,000 beneficiaries (4,001 men and 2,999 women) who will be assisted to open up new areas for lowland rice production in FY16 (Table 6). This represents 100 percent of the targeted beneficiary number for the lowlands. The women identified represent 43 percent of the total beneficiaries.



Figure 2: A Lowland rice farmer at a rice harvest in Compound 2, Grand Bassa County

Table 6: FY16 lowland rice beneficiaries' identification selection

County	Targeted Lowland Rice Ha	Targeted Lowland Beneficiaries	Beneficiaries selected in November			Beneficiaries selected in December			Beneficiaries selected YTD		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
Bong	200	1,400	447	315	762	400	238	638	847	553	1,400

Nimba	300	2,100	1,106	845	1,951	100	49	149	1,206	894	2,100
Lofa	500	3,500	1,528	1,272	2,800	420	280	700	1,948	1,552	3,500
Grand Bassa	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1,000	7,000	3,081	2,432	5,513	920	567	1,487	4,001	2,999	7,000

Verification and mobilization of these farmers depends on the approval of FED's request for a no-cost extension that will allow actual implementation to continue through September 2016. Without the no-cost extension, USAID FED will be unable to implement lowland rice production activities which are scheduled to start in June 2016. This means that the project will be unable to support 7,000 new beneficiaries, who could potentially apply improved technologies on an additional 1,000 ha and produce another 4,000 MT of paddy rice valued at US\$1.5M.

Enhancing mechanization for lowland rice production:

In Q1, the 30 power tiller operators supported in FY15 tilled a total of 111 ha of lowlands as part of their investment cost share obligations. In total, these operators have provided power tiller services to 745 ha of lowlands or 52 percent of the land allocated under their MoU obligations (Table 7).

Table 7: Total area tilled by power tiller operators

County	Number of power tiller operators	Target cost share area (Ha)	Total area tilled in FY15 (Ha)	Area tilled in October (Ha)	Area tilled in November (Ha)	Area tilled in December (Ha)	Total area tilled YTD (Ha)	Area pending to be tilled (FY16 Lowland Rice) Ha
Bong	10	480	204	40	52	0	296	184
Lofa	9	432	117	0	0	0	117	315
Nimba	10	480	265	19	0	0	284	196
Grand Bassa	1	48	48	0	0	0	48	0
Total	30	1,440	634	59	52	0	745	695

Promoting embedded services by the private sector

Technical assistance to aggregators, traders, processors, and rice business hubs in coming up with business-to-business models that embed services to farming groups:

In Q1, USAID FED developed a simplified pricing model that can support traders, aggregators, and rice business hubs to determine purchase prices of paddy rice and sales pricing for milled rice, which will enable them to compete with imported rice distributed through the domestic retail supply chains. This analysis showed that some aggregators could access paddy rice at the farm gate level for as low as US\$12 per 50 kg bag and still achieve competitive pricing of US\$35 per kg for milled rice at the community markets.

USAID FED continued to provide business development advisory services to the traders, aggregators, and rice business hubs to ensure that they prioritize competitive pricing of their paddy and milled rice. Fifteen rice business hubs are anticipated to generate a total of 12,100 MT during the period November 2015-February 2016, with four more to come on line shortly thereafter.

The project also assisted Selma Agriculture Corporation, an integrator and private enterprise from Lofa County, to sign a supply contract agreement with FABRAR Liberia valued at US\$168,000. This agreement was signed on November 18, 2015. Under this agreement, Selma Agriculture Cooperative will supply FABRAR Liberia Inc. with 280 MT of milled rice. The aggregator has already established an extensive network of rice farmers (both USAID FED supported and non- USAID FED supported) who will supply paddy rice for milling.

By the end of Q1, Selma Agriculture Corporation had procured 300MT of rice valued at US\$105,900 from farmers in Lofa. No sales have taken place at the community market due to ongoing negotiation between the MoA and John Selma on price standardization and trading.

USAID FED made efforts to assist the integrator through IBEX to access trading capital of US\$100,000 from the DCA facility held at AfrilLand Bank. These funds are crucial for the purchase of paddy rice this season. However, the major challenge faced has been assisting emerging enterprises to circumvent stringent banking requirements that render it difficult to access agriculture financing. John Selma, the integrator, was also named Liberia's "Man of the Year" for 2015 by the Daily Observer Newspaper for his efforts and successes in developing rice production in Lofa County.



Figure 3: CEO of FABRAR Liberia Inc., Fabio Lavelanette and CEO of Selma Agricultural Corporation, John Selma signing a purchase agreement at USAID FED Offices in Monrovia

Support two aggregators with trucks on cost-share to support timely and reliable aggregation and transportation of paddy rice:

In November 2015, the motor vehicle vendor contracted to supply a US\$65,000 six ton truck that will be cost shared between USAID FED and the Selma Agricultural Corporation, informed USAID FED that the truck will be available for delivery during the month of December 2015. However, by the end of December, the vendor was yet to deliver the truck as they had not completed the assembly of the vehicle's body work. This truck will enhance the company's logistical capabilities to support farm gate aggregation. The Selma Agriculture Corporation has already bought four used trucks valued at US\$130,000 which are utilized to transport paddy rice from the farms to its warehouse and processing facility in Lofa County.

Promoting two rice crops per year

Hire a STTA to provide technical assistance to 42 irrigation spillway sites for double cropping:

In December 2015, Dr. Pandian Balamurugan, FED's Rice Technical Specialist, was deployed to Liberia after approvals from USAID were received. During the period, he commenced with site inspections of spillway sites and provided technical assistance to the rice business hubs in Bong and Nimba on their efficient operations during the current harvest season.

FY15 water management infrastructure sites:

By the end of Q1, farming groups located on 30 spillway



Figure 4: Spillway site in Yowee-Farvey, Zota District Bong County

sites had commenced preparations for upcoming double cropping planting season in Bong, Lofa, Nimba and Grand Bassa counties to double crop areas supported by the completed spillways and head dykes. FED anticipates a total of 42 spillway sites will receive technical assistance from Dr. Pandian Balamurugan, Rice Technical Specialist, to double crop on a total of 210 ha. The power tiller operators will be deployed to provide land preparation services to these lowland areas. These farming groups will be linked to aggregators to ensure they have access to improved seed and markets for their second cropping production.



Figure 5: Dr. Pandian Balamurugan with farmers at the Doumpa rice business hub in Nimba County

Enhancing post-harvest management practices

FY14 Rice Business Hubs:

In Q1, four rice business hubs established in FY14 processed a total of 53 MT of paddy rice and generated US\$34,041 through milling and sales in the community markets (Table 8). Additional information for the five other hubs will be reported in January 2016 when information on the full inventory is received.

Table 8: FY14 RBHs inventory and sales for FY15

County	RBH location	Sales Volume in November (MT)	Sales Value in November (US\$)	Sales Volume in December (MT)	Sales Value in December (US\$)	Sales volume YTD (MT)	Sales value YTD (US\$)
Lofa	Serkonedu	26	\$18,720	22	\$14,960	48	\$33,680
	David Selma Town	0	\$0	0	\$0	0	\$0
	Foya town	0	\$0	0	\$0	0	\$0
	Sub Total	26	\$18,720	22	\$14,960	48	\$33,680
Nimba	Dumpa	0	\$0	0	\$0	0	\$0
	Payee	0	\$0	0	\$0	0	\$0
	Boweh	0	\$0	0	\$0	0	\$0
	Sub Total	0	\$0	0	\$0	0	\$0
Grand Bassa	Kpelle Town	0	\$0	0	\$0	0	\$0
	Sub Total	0	\$0	0	\$0	0	\$0
Bong	Garmue	1	\$61	1	\$38	2	\$99
	Bongmines	2.7	\$162	1	\$100	4	\$262
	Sub Total	3.7	\$223	2	\$138	5	\$361
Total		54	\$18,943	24	\$15,098	53	\$34,041

FY15 Rice business hubs:

By the end of Q1, construction of the nine new rice business hubs was still in progress in Bong, Nimba and Lofa counties. Challenges included delays by the communities in transporting local materials to the construction sites

due to continuous heavy rains that made roads impassable. Despite these challenges, significant gains have been made in the nine sites. It is anticipated that the construction and installation of the rice processing equipment in all nine business hubs will be completed before the end of March.

Supporting establishment of distribution of local rice in the mainstream market and brand development

Sign Memorandum of Understanding (MoU) with the private sector to establish buying stations and procure locally milled rice:

During the reporting period, USAID FED held meetings with SWAT (George Nehme) and UCI (Anwar Ezzedine), the two largest importers of rice in Liberia, in order to explore possible partnerships in establishing retail distribution channels for locally produced and milled Liberian rice. Both companies expressed interest in the purchase and distribution of locally milled rice through their distribution channels and agents located within USAID FED-supported counties. The challenge is to get the farmers to sell their paddy rice at prices that these private sector companies are willing to buy. USAID FED further compiled an inventory forecast from the rice business hubs of 12,100 MT of rice expected to be milled through these facilities in Bong, Nimba, and Lofa counties. The prices quoted by the farmers were not competitive based on prices of imported rice. In November, USAID FED came up with a pricing model that will help the rice business hubs understand competitiveness and pricing of product based on market signals, as well as enable them to leverage business to business relationships with SWAT and UCI, not only for this harvest season but also for a longer term period. This business development technical assistance will be provided to the rice business hubs and integrators during Q2 of FY16.



Figure 6: The Rice Business Hub under construction in Salala, Bong County

Task 1B: Increased Productivity and Profitability of the Cassava Value Chain

Improve productivity of cassava farmers

Provide technical assistance and farming guides to FY13, FY14 and FY15 cassava groups to ensure they continue to apply improved practices and use improved varieties:

During this reporting period, USAID FED continued to support the FY13, FY14, and FY15 cassava farmers by providing extension services through technical staff, field extension officers, and five LNGOs contracted in FY15. The LNGOs will provide extension services until the end of Q2 in March 2016.

Harvest and sales of FY14 cassava crop in FY16

In Q1, a total of 8,478 MT of cassava tuber from the FY14 cassava crop was harvested from a total of 474 ha. In total, 29,907 MT of cassava tuber has been harvested from 1,665 ha of the FY14 crop (Table 9). This represents approximately 69 percent of the anticipated area and harvest. Bong County has exceeded its harvest target for FY14 production while Grand Bassa County has completed harvesting. There was a decline in harvest volumes from October to November because some of the farmers were concentrating on harvesting their rice crop.

Table 9: Harvest of FY14 Cassava crop

County	Area planted (Ha)	Expected harvest (MT)	FY15		FY 16 Q1		Total	
			Area (ha)	Volume (MT)	Area (ha)	Volume (MT)	Area (ha)	Volume (MT)
Bong	480	8,640	189	3,408	307	5,490	496	8,898
Nimba	960	17,280	274	4,928	103	1,858	377	6,786
Lofa	240	4,320	19	340	53	932	72	1,272
Grand Bassa	720	12,960	709	12,753	11	198	720	12,951
Total	2,400	43,200	1,191	21,429	474	8,478	1,665	29,907

In Q1, a total of 8,020 MT of cassava tuber was sold for US\$440,361. In total, 27,103 MT of the FY14 cassava crop has been sold for US\$1,409,779 (Table 10). This represents 51 percent of the sales target. Households are retaining about 10 percent of the harvest for household consumption.

Table 10: Sales of FY14 Cassava tubers

County	Targets		FY15		FY16 Q1		Total	
	Volume (MT)	Value (US\$)	Volume (MT)	Value (US\$)	Volume (MT)	Value (US\$)	Volume (MT)	Value (US\$)
Bong	6,912	552,960	3,328	209,548	5,270	253,255	8,598	462,803
Nimba	13,824	1,105,920	3,075	236,735	1,761	133,446	4,836	370,181
Lofa	3,456	276,480	203	15,285	811	46,609	1,014	61,894
Grand Bassa	10,368	829,440	12,477	507,850	178	7,051	12,655	514,901
Total	34,560	2,764,800	19,083	969,418	8,020	440,361	27,103	1,409,779

Recruitment of 6,000 new beneficiaries for FY16 cassava cropping cycle

In Q1, USAID FED identified 6,000 (3,504 male and 2,496 female) potential beneficiaries for the FY16 cassava crop production cycle in the four counties (Table 3). Verification and mobilization which should have been done in Q1 will now take place in Q2 because of the delay in the approval of the FY16 work plan.

Table 11: FY16 new farmer beneficiaries identified by County

County	Target	Identified	% distribution	Gender aggregation			
				Male	% of total	Female	% of total
Bong	1,200	1200	20%	655	11%	545	9%
Nimba	1,600	1600	27%	837	14%	763	13%
Lofa	0	0	0%	0	0%	0	0%
Grand Bassa	3,000	3000	50%	1,909	32%	1091	18%
Montserrado	200	200	3%	103	2%	97	2%
Total	6,000	6,000	100%	3,504	58%	2,496	42%

Demonstrating ISFM using legumes for intercropping:

In FY15, USAID FED distributed cowpeas and peanuts for intercropping with cassava. A total of 1.5 MT of cowpeas and 4.8 MT of peanuts were distributed for intercropping on 57 ha and 162 ha, respectively. The projected production for cowpeas was 30 MT based on an average yield of 500 kg per hectare. The actual yield however, was very low at 181kg/ha resulting in just 10 MT of production from 55.4 ha of intercropped cassava

farms (Table 12). The wrong timing in planting and bad weather had adversely affected the growth and yield of the legumes.

Table 12: Cowpeas harvest Q1 FY16

County	Kuus	Cowpeas provided (MT)	Area planted (Ha)	Projected harvests (MT)	Area harvested in Q1 (Ha)	Volume harvested in Q1 (MT)
Bong	125	0.3	12	6	12	1.3
Nimba	268	0.7	27	14	27	4.7
Lofa	75	0.2	7	4	6	2.7
Grand Bassa	109	0.3	11	6	10	1.2
Total	577	1.5	57	30	55	10.0

The expected production of the peanuts was 130 MT given an average yield of 800kg/ha (Table 13). However, by the end of Q1, only 9.5 MT had been harvested from 116.9 ha (81kg/ha). This is just 7 percent of the target harvest. The most affected counties were Lofa and Grand Bassa which produced 3 percent and 1 percent of their production targets, respectively. As in the case of cowpeas, late planting and torrential rains negatively affected the yield. Furthermore due to the poor production, the farmers decided to keep the harvested seeds for the next planting season instead of selling them.

Table 13: FY16 Peanut harvest

County	Kuus	Peanuts provided (MT)	Area planted (Ha)	Projected harvests (MT)	Area harvested in Q1 (Ha)	Volume harvested in Q1 (MT)
Bong	125	0.983	35	28	35	2.3
Nimba	268	2.010	74	59	74	6.4
Lofa	75	0.563	21	17	2.4	0.5
Grand Bassa	109	0.855	32	26	5.5	0.3
Total	577	4.366	162	130	116.9	9.5

Link cassava farmers to the 80 commercial nurseries to increase access to improved planting material

In Q1, three USAID FED assisted cassava commercial nurseries in Nimba County sold a total of 575 bundles of improved cassava cuttings for US\$2,875 to 55 FED and non-FED farmers. The nurseries are still growing planting materials which will be ready for the FY16 cassava planting expected to take place from May 2016.

Increase Market Access

Supporting cassava processors and integrators to link cassava farmers to markets

In Q1, 23 micro-processors procured 539MT of cassava tubers worth US\$25,889 from both USAID FED and non-FED farmers across the four counties (Table 14) for processing into various products.



Figure 7: New cassava varieties being reproduced on one of the USAID FED supported cassava nurseries

The fresh cassava tubers bought by the 23 micro-processors was processed into different products such as *gari* and *fufu*. Sales of the products reached 92.3 MT with a value of US\$29,153 (Table 15).

Two Monrovia-based small processors (i.e., LBI and YAEHD) produced 33 MT of assorted processed cassava products from 99MT of CFTs bought at US\$5,841 from both USAID FED and non-FED farmers. Farmers from Grand Bassa supply most of the CFTs.

Increase Access of Processors, Traders, Logistics Providers, and Integrators to Financial and Business Development Services

Support at least five new micro-processors in Grand Bassa County to upgrade their processing and storage capacities:

Nimba and Grand Bassa counties have the largest number of cassava farmers assisted by USAID FED. However, Grand Bassa County has the lowest number of microprocessors (three). To ensure that there is balance between production and processing, an additional five micro-processors will be established in Grand Bassa County in FY16. Currently, the identification process of the five micro-processors is in progress and is expected to be completed by the end of January 2016.

Provide technical assistance to existing cassava processors:

In Q1, USAID FED continued to monitor and provide technical assistance to 22 micro-processors. This included calibration, repair of equipment and training on proper use and maintenance. Figure 8 shows a USAID FED technician demonstrating the correct way of using a mechanical grater.

By the end of December 2015, the 19 cassava presses recalled for adjustment had been returned to the processors after undergoing the required testing. The beneficiaries signed certificates of acceptance to acknowledge receiving the presses in proper working condition. There are still four outstanding presses for repair, one for Falama and the other three for Bong County processors. To facilitate the future repair of these presses, the vendor has endorsed six workshops in Bong, Nimba, Lofa, and Grand Bassa.

During the same time period, USAID FED tracked the performance of the micro-processors to monitor their gross margins so that those performing poorly can be given more attention by determining what specific interventions they needed to enhance their performance. This activity is being done in preparation for the FY 16 activity cassava value chain work plan.

Table 14: CFT purchases by Micro-processors

County	Micro-processors	Tubers purchased in Q1 (MT)	Value of tubers purchased in Q1 (US\$)
Bong	11	386	\$17,806
Nimba	6	46	\$3,134
Lofa	3	34	\$2,029
Grand Bassa	3	73	\$2,920
TOTAL	23	539	\$25,889

Table 15: Sales of cassava processed by the Micro-processors

County	Micro-processors	Products sold in Q1 (MT)	Value of products sold in Q1 (US\$)
Bong	11	35.8	\$7,760
Nimba	6	18.7	\$9,632
Lofa	3	10.8	\$4,899
Grand Bassa	3	27	\$6,862
TOTAL	23	92.3	\$29,153



Figure 8: USAID FED technician showing the proper use of the mechanized grater

In December three micro-processors in Nimba were assessed. These include the Gbehley Women's Group in Karnplay, Old Timer Women's Group in Ganta and Royal Investment Inc. in Tapita. The assessment which will continue in the next quarter will help in determining which additional interventions are needed to improve the productivity and viability of these micro-enterprises.

Task 1.C: Improving Productivity and Profitability of the Horticulture Value Chain

In FY15, USAID FED supported 6,419 vegetable farmers to produce high value local vegetables through the application of improved technologies such as high yielding and disease resistant seed varieties, fertilizer application, integrated pest management, as well as harvest and post-harvest handling of their produce to reduce losses. In Q1 of FY16, USAID FED continued to provide technical assistance to these farmers to ensure that they continued to apply the technologies and management practices demonstrated to them.

Technical assistance included pest and disease control advisory to prevent outbreaks of predatory insects and diseases, as well as providing irrigation pipe replacements to prevent wilting of plants. The dry season started in October and is expected to last until April. Availability of irrigation and timely application are very crucial in maintaining healthy growth of the vegetables during this time.

Lower volumes were produced in December 2015. Most of the planting took place in September and early October, which is considered to be the best planting time because adequate rainfall supported early growth of vegetables.

Vegetable sales

In Q1, the FY14 and FY15 vegetable clusters and the 25 peri-urban agribusiness enterprises harvested a total of 391 MT of assorted vegetables which they sold for US\$607,049 (Table 16). This represents 23 percent of the FY16 sales target of US\$2.6M.

Table 16: FY16 vegetable harvests and sales

County	October		November		December		YTD	
	Volume (Kgs)	Value (US\$)	Volume (Kgs)	Value (US\$)	Volume (Kgs)	Value (US\$)	Volume (Kgs)	Value (US\$)
Montserrado	34,442	\$51,971	30,999	\$57,183	46,240	\$95,423	111,681	\$204,577
Margibi	53,926	\$143,134	49,750	\$92,361	70,468	\$111,102	174,144	\$346,597
Bong	12,838	\$15,283	14,687	\$3,297	548	\$596	28,073	\$19,176
Nimba	16,863	\$7,452	4,997	\$2,389	3,904	\$2,603	25,764	\$12,444
Lofa	490	\$251	9,210	\$2,532	25,753	\$9,806	35,453	\$12,589
Grand Bassa	6,887	\$6,686	2,529	\$1,649	6,840	\$3,331	16,256	\$11,666
TOTAL	125,446	\$224,777	112,172	\$159,411	153,753	\$222,861	391,371	\$607,049

Improving productivity through GAP and IPM

Provide technical assistance to 321 farmer groups (including 25 agribusinesses) on GAP and IPM and organize them into production units

In Q1, USAID FED continued to provide technical assistance to the 321 farmers groups through its Horticulture Specialist and field extension staff as well as through four LNGOs. In November, the contracts of the LNGOs contracted by USAID FED to support implementation of activities expired. It was thus challenging to gather data

and information in the field. There is a need to increase the number of extension officers at the county level to ensure that vegetable farmers continue to receive regular technical assistance.

Technical assistance focused on Integrated Pest Management (IPM), in order to ensure that crop losses as a result of insect and disease outbreaks were prevented. This was particularly evident in October when timely intervention by USAID FED in several clusters contained pest and disease infestations. Lead farmers were trained through demonstrations on effective application of pest control chemicals and herbicides such as glyphosate for minimum tillage.



Figure 9: Mensah Cluster members being trained on application of pest control chemicals

The dry season production period commenced in October 2015 and will continue until April 2016. Some clusters experienced prolonged dry spells because of damaged irrigation pipes, affecting the normal growth of plants. In December, three clusters (CGCYWEP, Mawah, and Mensah) were each provided with 100m long two inch diameter outlet pipes to assist with effective irrigation. USAID also provided drip irrigation kits to 14 clusters located in Montserrado and Margibi. By the end of Q1, the distribution and installation of drip irrigation kits was still taking place in Bong, Nimba, Lofa and Grand Bassa counties. Some of the challenges observed included the absence of contracted LNGOs due to contract expiration, which slowed the distribution process, access to close water sources within the clusters, and the absence of farmers in some clusters during scheduled installation.

Link farmers to agro-dealers/integrators to ensure they have access to disease resistant and high yielding seeds, chemicals and pesticides:

In December 2015, AVRDC met with USAID FED to discuss how to collaborate to assist AVRDC in implementing the “Deploying Vegetable Seed Kits to Tackle Malnutrition in Liberia” project funded by the Bureau of Food Security. Under this collaboration, AVRDC will provide seed kits to a total of 10,000 USAID FED-supported beneficiaries in Bong and Nimba counties. The seed kits will serve for the establishment of vegetable gardens of disease resistant and high-yielding vegetable varieties in order to facilitate aggregation for commercial or home consumption. In Q2, USAID FED will work with AVRDC to ensure that agro-dealers and integrators are incorporated in the implementation process. This will also ensure that these farmers have access to chemicals and pesticides.

Reduce harvest and post-harvest losses of vegetables along the value chain

Provide technical assistance to 321 farmer groups (including 25 agribusinesses), six trader associations and transporters on good harvesting and post-harvesting practices:

In Q1, USAID FED continued to provide technical assistance on harvesting and post-harvest practices to 321 farmers groups and trader associations. This assistance was provided through the Horticulture Specialist and extension officers. As mentioned earlier, the contracts of the LNGOs contracted by USAID FED to support implementation of activities expired in November. There is a need to increase the number of extension officers at county level to ensure that vegetable farmers continue to receive regular technical assistance.

Production in rain shelters

In Q1, farmers continued to utilize the rain shelters for production. The vegetables planted included tomato, cabbage, sweet pepper, lettuce, cucumber, and watermelon. This was the trend in all the counties. Encouraged

by the good returns from vegetables grown in rain shelters, some farmers replicated the technology using local materials. For example, in Mawah cluster, farmers grew chili pepper under this kind of structure. Higher yield and better quality fruits resulted compared to field grown chili.

A locally made rain shelter is made up of bamboos for the frame and posts and ordinary clear/transparent polyethylene sheet (PE) as a cover. The plastic sheets are clamped to the rafters by bamboo slats. The bamboo slats serve as rafters and bamboo poles as braces, purlins and ridges. Plastic strings/ropes and rattan strips tie together the structure. The bamboo posts are directly embedded in the soil.

As part of the FY16 Work Plan, rain shelters will be built with local materials and will be constructed in three production clusters, Marwah, Mensah and CGCWSY at Mount Barclay, Montserrado. The plastic roofing is ultraviolet resistant polyethylene (UVR PE) 150 mill micron sheets.



Figure 10: An example of a locally made rain shelter in Mawah Cluster, Margibi County.

Aside from rain shelters, farmers also adopted other practices such as foliar fertilizing and growing of seedlings in seed trays. Technology adoption was made possible by USAID FED efforts to strengthen the cohesion of vegetable production clusters and their organization into *Kuus*, which allowed farmers to share labor and resources. Collaboration among group members producing high value vegetables saw the effective management of field activities such as land preparation, nursery establishment, transplanting, irrigation, and other cultural management practices. It also facilitated the adoption of improved practices such as the use of organic fertilizer; recommended plant spacing, fertilizer application, pest and disease control, and weed control.

Provide technical assistance to farmer groups, trader associations, and private firms that have received technologies to optimize utilization:

USAID FED continued to undertake field visits with farmers to demonstrate the right and effective postharvest handling, sorting, grading and packing practices.

While the use of stackable plastic crates demonstrated post-harvest loss reduction, the adoption of the technology provided by USAID FED by farmers did not expand in Q1. This can be attributed to the restricted access to and availability of the technology at county level as well as the low financial capabilities of the farmers. Further, some farmers used the crates for other purposes. In Q2, USAID FED will maximize the utilization of crates through the closed loop systems of the cold chains that have been established with ROSNA and Gbomai Farm.



Figure 11: USAID FED's Horticulture Value Chain Manager showing a farmer at Mensah cluster how to utilize packing crates for vegetable transportation

Establishment of zero energy and charcoal coolers:

In Q1, USAID FED held meetings with the trader associations and vegetable farmer groups in Bong, Nimba, and Lofa to discuss location selection and management plans needed for the proposed zero energy and charcoal coolers. It was observed that these target beneficiaries still have to resolve issues around the contribution, ownership, and management of these technologies. Based on prior experience USAID FED had with zero energy coolers established with trader associations in Montserrado and Margibi counties, it may be more realistic to establish this technology with individual entrepreneurs who have the capacity to co-invest and manage them.



Figure 13: Completed charcoal cooler in Brewersville, Montserrado County

The vegetable farmer groups targeted for establishment of charcoal coolers have similar challenges in terms of cost-share and management responsibilities. In Montserrado and Margibi counties, some of the established charcoal coolers were not being well managed by the groups. In Mensah Cluster, thieves had damaged the wire mesh and stolen some of the charcoal. Farmers also mentioned that the wire mesh had rusted and deteriorated due to the heavy rains. In Q2, USAID FED will attempt to identify the right individual beneficiaries within the four counties to ensure that if constructed, they will be managed and utilized properly.

Set up contract-growing schemes under the export program and supply to institutional buyers

Support at least two integrators to establish contract growing schemes, set up their production and packing operations and to provide embedded services and market access:

Establishment of refrigerated cold storage supply chains

The cold storage containers for ROSNA Inc. were delivered and installed in Nimba and Grand Bassa in November 2015. ROSNA Inc. has started storing vegetables in the cold storage facilities and farmers in Nimba are supplying the vegetables. On October 27, 2015 USAID FED held an inauguration ceremony for the refrigerated container established in Yekepa, Nimba County. These vegetables are supplied to the Acellor Mittal staff cafeteria. In Q2, USAID FED will assess the effect of these technologies in reducing post-harvest losses at the retail level.



Figure 12: Mrs Hannah Blackett, CEO ROSNA Services Inc. cutting the ribbon to inaugurate the facility at Yekepa, Nimba County



Figure 14: Okra graded for supply to ERA Supermarket

GBomai Farms located in Margibi County received the cold storage container in December 2015. The installation and testing of the reefer container will be completed in January 2016. GBomai Farms has provided a 44 kva generator to power the reefer container and has laid out the concrete flooring. Construction of the roof

will be completed in January 2016. USAID FED will provide technical training to Gbomai Farm personnel on post-harvest management of vegetables in Q2.

Provide technical assistance to support export of vegetables to European Union markets:

In FY15, USAID FED established Okra production towards facilitating volumes adequate for a trial export shipment. Eight greenhouses were under Okra production by the end of FY15. Five varieties (Clemson spineless, New Shangar FI, Sahari FI, Indiana and Pusa Sawani) were grown to assess their growth and yields under 'greenhouse' conditions. Harvesting of the okra started on September 20, 2015 and ended on October 30, 2015. Thus far, the New Shangar FI has been outstanding in terms of number of fruits and yield per plant and resistance to powdery mildew as compared to Indiana and Clemson spineless. The yield from New Shangar was 3.1 tons/ha as compared to 2.5 tons for Clemson Spineless. Production of the other varieties failed as farmers did not manage the crops well.

Although the yield of the varieties appear to be very low compared to what is reported, the average yield of eight tons is only for a period of 10 weeks from planting to harvesting. Fruits were harvested for five weeks. A full scale field production is to be tried in Q2.

In October, ERA Supermarket accepted to buy the okra, which were originally for export to France. Negotiations were held with ERA after the importer in France did not respond to communication from USAID FED. ERA offered US\$2.82 per kg, which was higher than the price of US\$1.85 offered by the importer in France. A total of 52 kg of okra produced by the trial plots were sold in October 2015. With this positive response, okra production will be expanded to 2.5 hectares based on the new activity proposal. The production clusters and plantation areas have been identified and are ready for preparation once the seeds are procured.

Provide marketing expertise to assist integrators access contracts with institutional buyers and supermarkets

USAID FED focused on strengthening activities with high value production clusters to serve the Monrovia and other urban centers marketing channels. Monrovia and the peri-urban areas of Montserrado and Margibi have about a third of Liberian population, with relatively higher purchasing power than the rest of the country. High value vegetables are in demand in these areas and command better prices.

Three production clusters in Mount Barclay (i.e. CGCWYEP, Mawah and Mensah) and two private sector enterprises (i.e., ROSNA Inc. and GBomai farms) have been selected for this focus. These enterprises will be provided with technical assistance towards production and supply of high value vegetables. The production clusters will also be assisted to expand their rain shelters using locally available materials and UV plastic sheet. USAID FED will provide the materials while the farmers will provide labor during the construction.

In Q2, USAID FED will also introduce vegetable varieties such as carrots, radish, spring onion, and coriander. Vertical planting and intercropping technologies will be demonstrated to increase productivity per unit area of the rain shelters.

USAID FED has also engaged in discussions with the Royal Hotel for the supply of lettuce and cucumber from project beneficiaries. Samples will be presented in January 2016 and the Mensah production cluster will be the lead supply group. The objective is to develop the groups' capacity to produce good quality and competitively priced high value vegetables before expanding to other production clusters and buyers. An integrator from Mensah cluster is currently supplying vegetables to the US embassy.

Task 1D: Increased Productivity and Profitability of the Goat Value Chain

Promote Improved Herd Management Practices

Technical assistance to continuing FY13, FY14, and FY15 farmers:

During the reporting period, USAID FED continued to provide technical assistance to FY13, FY14 and FY15 goat producer groups in 180 goat production intensification sites through its field extension staff and four contracted LNGOs. Technical assistance was provided towards ensuring that farmers continue to apply improved herd management practices, animal nutrition and to sell the right animals to the market. The four LNGOs subcontracted will provide technical assistance up and till March 2016.

Train 3,928 new beneficiaries on herd management practices and mineral salt lick fabrication:

In Q1, USAID FED identified a total of 3,267 beneficiaries (2,134 men and 1,133 women) from satellite communities who will be trained on herd management practices and mineral salt lick fabrication (Table 17). These farmers will also be assisted to design smaller shelters using local materials at no cost to USAID FED. It is expected that all of the targeted beneficiaries will be identified and verified by the end of January 2016.

Table 17: Beneficiary identification for FY16

County	Target number of beneficiaries for FY16	Beneficiaries identified in November			Beneficiaries identified in December			Beneficiaries identified YTD			Beneficiaries pending to be identified
		Total	Male	Female	Total	Male	Female	Total	Male	Female	
Nimba	1336	210	165	45	458	330	128	668	495	173	668
Bong	1,141	540	344	196	610	430	180	1150	774	376	0
Lofa	994	482	289	193	499	303	196	981	592	389	13
Grand Bassa	457	156	115	41	312	158	154	468	273	195	0
TOTAL	3,928	1,388	913	475	1,879	1221	658	3,267	2134	1,133	681

Goat production sites - kidding and mortality rates:

In Q1, a total of 1,126 new kids (625 male and 501 female) were born in the FY14 and FY15 USAID FED goat production intensification sites. During the same period, 118 goats were reported dead within these same sites. The mortality rate in total was 0.7 percent. These deaths occurred in Lofa, Nimba, Bong and Grand Bassa counties. 2

In Nimba County, the causes of death were attributed to consumption of plastics, snake bite and diarrhea. In Bong County, the causes of death were attributed to snake bite but the cause of death for three goats could not be established and is currently being investigated. In Grand Bassa County, the cause of death was attributed to diarrhea. In Lofa the causes of death were mainly as a result of suspected PPR disease. USAID FED supported Community Animal Health Workers (CAHWs) continued to provide supportive treatment.

By the end of Q1, the herd size in USAID FED supported sites for FY14 and FY15 was 17,177 animals (Table 18).

Table 18: FY 16 Goat herd statistics

County	Number of sites	Number of Does	Number of Bucks	Total number of kids born FY15	Kids recorded in October	Kids recorded in November	Kids recorded in December	Total number of Goats in herd after kidding	Mortality by Q1	Total herd size end of November
Nimba	61	1,691	371	1,228	44	127	91	3,552	35	3,517
Bong	26	1,486	245	414	69	96	82	2,392	9	2,383
Lofa	49	2,112	1,114	2,528	117	171	114	6,156	16	6,140
Grand Bassa	44	2,043	1,431	1,506	40	68	107	5,195	58	5,137
TOTAL	180	7,332	3,161	4,448	270	462	394	17,295	118	17,177

Access to veterinary care:

In Q1, a total of 2,583 animals received veterinary treatment from CAHWs. A high number of animals in Nimba County were dewormed.

Table 19: Veterinary treatment by CAHWs

County	Number of animal treated in October	Number of animal treated in November	Number of animal treated in December	Total number of animals treated Q1
Nimba	634	1,059	428	2,121
Bong	0	25	0	25
Lofa	14	97	105	216
Grand Bassa	88	133	0	221
Total	736	1,314	533	2,583

Promoting Goat Shelters

In November, USAID FED followed up with beneficiaries on the status of three uncompleted goat shelters in Grand Bassa County. Construction materials (roofing sheets and nails) from these sites had been reported stolen and investigations were being conducted by the police. By the end of Q1, the matter had not yet been resolved by the courts. In order to ensure that the shelters are completed, USAID FED will provide the affected goat production sites with the required materials in January 2016 from stock available at the Monrovia warehouse.



Figure 15: FED and GDA Extensions officers conducting de-worming at FY 15 site in Nyoo, Saclepea District, Nimba County

Establish Aggregators to Provide Embedded and Technical Services

Provide technical assistance to 20 lead farmers and/or other private sector players in Bong, Nimba, Lofa, and Grand Bassa to establish them as integrators and traders.

By end of Q1, a total of 20 individuals were identified as potential integrators who will be supported to invest in goat trading and who will provide embedded services to goat farmers in USAID FED supported counties. In January 2016, USAID FED will sign MoUs with these aggregators (Table 20).

Table 20: Identified integrators by County.

County	Number of targeted integrators	Number of Integrators identified in November	Number of Integrators identified in December	Number of Integrators identified Q1
Nimba	7	4	3	7
Grand Bassa	3	2	1	3
Bong	5	3	2	5
Lofa	5	2	3	5
TOTAL	20	11	9	20

Provide technical assistance and training to lead farmers/private sector players on breeding and community buck exchange:

In November 2015, ACDI/VOCA's Farmer to Farmer (F2F) program informed USAID FED that a volunteer community breeding specialist had been identified and will be deployed to Liberia to support USAID FED goat production intensification sites to implement the community breeding program. ACDI/VOCA has confirmed that the specialist will be deployed in February 2016 to commence with the assignment. It is anticipated that this specialist will also support CARI to develop a nucleus breeding herd manual for the nucleus breeding herd center that will be established by March 2016.

Establish Nucleus Breeding Herd at CARI

Develop nucleus breeding manual for CARI:

In Q1, USAID FED and the Central Agricultural Research Institute (CARI) signed a MoU for the conversion of the Livestock Quarantine Facility into a Nucleus Breeding Center. It is anticipated that the conversion work will commence in February 2016.

Provide Assistance to MOA in the Control of Peste de Petite de Ruminant (PPR)

In Q1, USAID FED completed the technical and financial evaluations of bids submitted by different institutions to conduct the PPR vaccination campaign. Following this process, BRAC was selected as the best institution to implement the PPR Vaccination Campaign. It is anticipated that BRAC will sign a contract with USAID FED in January 2016 and commence the assignment thereafter.

Formalizing livestock marketing

Goat sales

In Q1, 1,314 goats from FY14 and FY15 goat sites were sold for US\$84,048 (Table 21). This translated to an average of US\$ 64 per animal in Q1 (Table 21). While USAID FED only needs to achieve sales of 3,962 animals at an average of US\$77 per animal in order to meet the life of project target, it is expected that these sales target will be exceeded as USAID FED will support aggregators and traders with marketing activities. The current sales achievements represent 28 percent of the expected sales target.

Table 21: Goat sales

County	Number of goats targeted to be sold in FY16	Value of goat sales target for FY16 (US\$)	Number of goats sold in October	Value of goats sold in October (US\$)	Number of goats sold in November	Value of goats sold in November (US\$)	Number of goats sold in December	Value of goats sold in December (US\$)	Number of goats sold YTD	Value of goats sold YTD (US\$)
Nimba	1,344	\$103,488	53	\$4,170	55	\$3,552	78	\$4,690	186	\$12,412
Grand Bassa	477	\$36,729	51	\$3,595	66	\$3,630	51	\$3,595	168	\$10,820
Bong	1,150	\$88,550	137	\$10,205	193	\$14,980	240	\$17,460	570	\$42,645
Lofa	991	\$76,307	31	\$1,486	94	\$4,484	265	\$12,201	390	\$18,171
Total	3,962	\$305,074	272	\$19,456	408	\$26,646	634	37,946	1,314	\$84,048

Sub Task 1.1 Special Studies and MoA Data Collection System Development

Equipment available and delivered to MoA for effective monitoring

During the month of October 2015 the Bong County M&E system was verified. The verification visit reported on the challenges of the system and the extent to which elements of the system were being employed. Challenges of the system were highlighted and required action by the Ministry of Agriculture. Below is a list of issues identified during the verification visit.

- Bong County DAOs do not have access to the PDAs provided by USAID FED for data collection. Even though the PDAs were not programmed with indicators, they could be used to take photos of agriculture project sites as part of field data. The MoA, through its M&E Unit, was asked to ensure that equipment be used for the intended purpose.
- Data collection tools developed during the M&E system development in Bong have not been approved by the MoA and authorized for use by DAO. The M&E Unit of MoA needs to enforce the use of tools.
- Preliminary data stored so far by DAOs in Bong was not disaggregated by month, sex, and district. Storage and disaggregation of data is due to limited computer knowledge by DAOs. The MOA was encouraged to develop programs that would enhance improved skills of DAOs.

During November 2015, the Bong County M&E system was discussed with the Ministry of Agriculture in a bid to approve and authorize the use of data collection forms to be verified. The authorization was released by the M&E Unit of the Ministry on November 26, 2015. The data collection forms will be used for reporting agricultural data, using USAID FED supplied equipment.

A joint field visit of the MoA and USAID FED was made to Bong County to observe the activities of the M&E pilot project in the County. The M&E visit provided MoA central office with the opportunity to agree with FED on the gaps and challenges of the M&E system. At a meeting to present the finding of the joint verification, the Minister Moses Zinnah said it was important for the MoA to participate in the discussion of FED FY16 work plan. Consequently, on December 10, 2015 a meeting was held to review USAID FED 2016 work plan with the Minister of Agriculture and USAID Mission staff. Attendees of the meeting suggested drafting of a post USAID FED sustainability plan.

Equipment and materials procured for the MoA Offices in Nimba, Lofa, and Grand Bassa counties

In October 2015, USAID FED's M&E team developed a separate work plan articulating the 2016 planned activities for strengthening the Ministry's data collection, reporting and storage system. Inputs were made into the work plan by relevant staff of the Ministry, who expressed concern about USAID FED's commitment in supporting the establishment of M&E systems within the Ministry. This process was followed by a letter of approval by Minister Zinnah, calling for scale up of the Bong County M&E system in Lofa, Nimba, and Grand Bassa.

In November 2015, several discussions were held with the MoA designees on the best ways to implement the FY16 work plan. During these discussions, the MoA team, headed by Assistant Minister Patrick Worzie, pledged to ensure the timely implementation of these activities and requested USAID FED to begin procurement of equipment and training materials for the replication of the Bong M&E system in other FED counties, including Lofa, Nimba, and Grand Bassa. Procurement of equipment and materials for Nimba, Lofa, and Grand Bassa counties was pending entry of activity in TAMIS and the procurement processes.

In December 2015, USAID FED M&E team held discussions with MDF management, seeking advice on the best possible way for procurement of equipment for the MoA.

MoA staff capacity developed

Organize workshops to develop MoA Central Office Technical & M&E Staff Capacity building on GPS/PDAs data collection

During the reporting period, activities relating to strengthening capacity of MoA staff were planned and discussed with the Ministry. As contained in the FY16 work plan, six capacity building activities were scheduled. They included a LASIP indicator harmonization and work breakdown structure workshop; training of Central Ministry staff in the use of Statistical Package for Social Sciences (SPSS); refresher training on data management and reporting in Bong; and training in data management and reporting for MoA staff in Lofa, Nimba, and Grand Bassa. Concept notes for these training have been developed, shared and approved by the Ministry delegates. The Ministry agreed to initiate these activities in January 2016. The training activities have been developed in TAMIS awaiting approval of relevant USAID FED personnel.

Sub Task 1.2 Improved Access to Agricultural Inputs

In Q1, Mr. John Hurrell was recruited under IFDC as the Input Supply Team Leader to replace Mr. Steve Atkinson who left the program in November 2015. Mr. Hurrell commenced his duties on December 17, 2015.

Increase access to improved seed and good planting material

Provide technical assistance to 70 rice seed multiplication sites in collaboration with Africa Rice:

By the end of Q1, the 15 rice seed inspectors contracted by USAID FED completed a total of 216 site inspections across 70 rice seed multiplication sites. The recorded numbers of inspections are based on the hard copy reports received and verified by USAID FED. Inspectors are expected to conduct a total of 420 inspections (six inspections per site) covering 435 Ha of upland and lowlands (Table 22) by the end of Q2. At the end of the harvesting period (February), a



Figure 16: Rice seed inspector inspecting Fuamah Multi Co-op Lowland Rice Site in Bong County

comprehensive report will be provided detailing the number of sites that produced rice seed as per the certified seed rice protocols developed by CARI and Africa Rice.

Table 22: Inspections conducted by County

County	Number of inspections to be conducted by end of Q2	Number of inspections Conducted YTD	Outstanding Inspections
Grand Bassa	30	15	15
Nimba	54	30	24
Lofa	156	78	78
Bong	176	136	40
Total	416	259	157

Harvesting of rice seed multiplication sites:

Table 23: Rice seed harvest from upland sites

County	# of Sites	Area planted (Ha)	Projected harvest (MT)	Area harvested in Oct (Ha)	Volume harvested in Oct (MT)	Area harvested in Nov (Ha)	Volume harvested in Nov (MT)	Area harvested in Dec (Ha)	Volume harvested in Dec (MT)	Area harvested YTD (Ha)	Volume harvested YTD (MT)	Pending area to be harvested (Ha)
Bong	9	90	180	11	16	31	69	48	93	90	178	0
Nimba	1	10	20	1	1	0	0	9	19	10	20	0
Lofa	1	10	20	0	0	4	9	6	13	10	22	0
Grand Bassa	1	10	20	5	8	0	0	2	4	7	12	3
TOTAL	12	120	240	17	25	35	78	65	129	117	232	3

In Q1, 232 MT of rice seed was harvested from 117 ha of upland sites (Table 23), totaling 97 percent of the expected rice seed production for upland sites. The average yield recorded was 2 MT per ha.

Similarly, 810 MT of rice seed was harvested from 201 ha of lowlands (Table 24), representing 64 percent of the expected rice seed production for lowland sites. The average yield recorded was 4 MT per Ha.

Table 24: Rice seed harvest from Lowland sites.

County	# of Sites	Area planted (Ha)	Projected harvest (MT)	Area harvested in Oct (Ha)	Volume harvested in Oct (MT)	Area harvested in Nov (Ha)	Volume harvested in Nov (MT)	Area harvested in Dec (Ha)	Volume harvested in Dec (MT)	Area harvested YTD (Ha)	Volume harvested YTD (MT)	Pending area to be harvested (Ha)
Bong	20	124	496	0	0	5	20	119	474	124	494	0
Nimba	9	60	240	0	0	0	0	31	128	31	128	29
Lofa	25	108	432	3	12	12	48	32	128	41	188	61
Grand Bassa	4	24	96	0	0	0	0	0	0	0	0	0
TOTAL	58	316	1,264	3	25	35	78	65	129	117	232	3

Cumulatively, 1,042 MT of rice seed was harvested from 319 ha. This represents 69 percent of the anticipated cumulative rice seed production for the FY15 crop. These upland and lowland sites are expected to produce 1,500 MT of rice seed in FY16. The harvest of the upland and lowland areas is expected to be completed by the

end of January 2016. The harvest from Grand Bassa County will be reported in February once the rice seed inspection reports have been received.

Provide technical assistance to 70 rice seed multiplication sites in collaboration with Africa Rice:

In Q1, WAAP and Africa Rice conducted an inspection of USAID FED's rice seed multiplication sites. The objective of the mission was to follow up on foundation seed distribution by USAID FED and to verify whether planting and production activities are consistent with best practices. WAAP intends to purchase all of the upland and lowland rice seed from the RSM farmers for redistribution to Liberian rice farmers.



Figure 17: Inspection team at RSM site in Doetain-Ta Community, Bong County

The mission team included Mr. Edward P. Borloh (WAAPP's M&E Officer), Dr. Inoussa Akintayo (Africa Rice Country Representative), Mr. Patrick K. Farnga (USAID FED's Irrigation Specialist), Mr. Jean Nguessan (Africa Rice-CARI Field Technician), and Mr. Emmanuel Zeh, (USAID FED Bong County Field Extension Officer) A total of six communities (Doetain-ta, Belemu #1, Koryah, Garmu #2, Gbarngasiaquelleh and Garmu #1) were visited in Bong County on October 1. WAAPP submitted a report to USAID FED outlining seven recommendations to improve community adherence to rice seed producer best practices and protocol.

Map the cassava farmers (both USAID FED and non-USAID FED) and the demand for cuttings around the 80 commercial nurseries:

In Q1, USAID FED collected GPS coordinates for 47 commercial cassava nursery sites and their total land area. In January 2016, USAID FED will complete the mapping for all 80 commercial nurseries, including the surrounding farms. Once the mapping exercise is complete, the demand for cuttings will be compared with the actual production of the 80 commercial nurseries. This will enable USAID FED to develop strategies for closing the supply and demand gaps. During Q1, it was expected that the harvest of improved cassava cuttings from the two screening sites in Lofa would commence in December 2015. However, the cutters who were trained by CARI were unavailable for deployment due to an ongoing project at the Central Agricultural Research Institute. The harvests of the remaining cuttings will commence in January 2016.

Efficient inorganic fertilizer use and organic fertilizer mix introduced and promoted

Produce soils maps and distribute to relevant information access points:

During Q1, LISGIS plotted nine soil maps based on soil analysis results for 264 soil samples tested and analyzed by USAID FED. These maps were printed and officially presented to the Minister of Agriculture Dr. Moses Zinnah during USAID FED's Knowledge Sharing event on December 16, 2015. These maps will be useful to farmers and organizations in determining fertilizer requirements for rice production.



Figure 18: Former USAID FED Chief of Party Agnes Luz handing over Soils Maps to Dr. Moses Zinnah, Minister for Agriculture

Provide technical assistance to the CoEs to promote fee-based soil testing using the science labs

In Q1, USAID FED's Soil Scientist, Mr. Emmanuel Lincoln, was contracted under Component 3 to provide training to the CoEs during the months of November and December 2015. Two lab technicians and a supervisor (a total of six persons) were trained on soil testing and analysis in both the BWI and the GBCC. In Q2, a similar number of personnel will be trained at the Lofa County and Nimba County Community Colleges. This activity is reported in greater detail under the Component 3 section of this report.

Demonstrate Fertilizer Deep Placement (FDP) in vegetable farming:

In FY15, USAID FED conducted trials in four rain shelters across Margibi and Montserrado counties to demonstrate FDP in vegetable farming.

Each of the shelters received NPK 15:15:15 at the rate of 7 grams per plant in briquette form, which were placed between okra plants 7 and 10 cm below the soil surface. These sites were planted with two okra varieties, Indiana and Clemson spineless. Data collected on follow up visits revealed very few significant differences in plant height or number of leaves between those planted with the application of FDP and those with the NPK granule.

Similar trials were conducted with an Okra variety called New Shangar. In October 2015, it was observed that plots where briquettes were applied bore more fruit per plant than those with granules. Based on the fruit count, plants in plots where briquettes were applied yielded almost 300kg of Okra per ha more than plants where granules were used. In FY16, wider application of this technology is required to determine how effective fertilizer depth placement can be on selected varieties of vegetables.



Figure 19: USAID FED Soil scientists providing training to lab technicians in Grand Bassa Community College, Grand Bassa County

Table 25: Fertilizer Depth Placement Results

Okra Variety	Fertilizer	No of fruits/plant	Weight of fruits/plant (g)	Yield kg/ha
New Shangar	NPK 15.15.15 Briquette (FDP)	6.3	62.2	3,297
	NPK 15.15.15 Granules	5.1	54.9	3,048

Conduct UDP+SRI research and carry out comparative analysis of cost and benefits vs. UDP only and SRI only:

Based on the reported findings of the UDP+SRI research conducted in FY15, USAID FED's Soils Scientist, Emmanuel Lincoln gave a presentation of the findings to the Agriculture Coordination Committee on October 29, 2015. UDP+SRI treatment plots yielded an average of 7.3 MT per ha in comparison to 4.5 MT per ha with UDP. A cost to benefit analysis showed that rice production using UDP+SRI technology is 136 percent more profitable when compared to the use of UDP alone. The 45 participants in attendance responded to the presentation positively as illustrated by their engagement on questions related to the projects technical components.

Sub Task 1.3: Agricultural Extension Support

Create access to and availability of agricultural information and standardized extension material

Print and disseminate 2,400 extension materials and 36,100 farmer guides to information access points:

By the end of FY15, USAID FED developed a total of 46 technical extension materials (25 extension booklets and 21 farmer guides) for the rice, cassava, vegetable and goat value chains. The curricula and developed materials were validated by relevant stakeholders active in the value chains prior to their dissemination.

In Q1 quarter one, the developed materials were revised, reviewed and approved in coordination with the MoA. USAID FED officially handed over the approved extension materials to the Minister of Agriculture, Dr. Moses K. Zinnah during USAID FED's annual knowledge sharing event held at the Paynesville City Hall in Monrovia on December 16, 2015. It is anticipated that 2,400 extension booklets and 36,100 farmer guides will be printed before the end of January 2016 and disseminated to the MoA, the civil society and the private sector participating in these value chains.



Figure 20: USAID FED Chief of Party Agnes Luz handing over extension materials to Dr. Moses Zinnah, Minister for Agriculture

Support to the MoCI conference:

In Q1, USAID FED gathered video content for five project success stories from Bong, Lofa, and Grand Bassa counties. On November 17-18, 2015, one of the videos featuring John Selma, a successful aggregator from Lofa County, aired at the 2015 MSME conference organized by the MoCI at the Monrovia City Hall.



Figure 21: USAID FED beneficiary and rice aggregator, Mr. John Selma from Lofa County being interviewed at one of his farms

Development of radio programs and broadcasting:

In Q1, USAID FED gathered radio content for the fourth edition of the *On the Farm* radio program. The show was broadcasted by UNMIL Radio and United Methodist Radio in November 2015. The radio program featured issues of youth empowerment in agriculture and improved irrigation in rice production. Firestone Radio located in Harbell, Margibi County also agreed to broadcast for free, the *On the Farm* radio program during 2016. This agreement will ensure that agricultural information is made widely available to more households in Margibi, Grand Bassa and Montserrado counties.

Train extension personnel on the use of extension material and farmer guides:

In Q1, USAID FED developed a training plan for extension personnel who will be trained on the use of extension materials and farmer guides. A total of 1,027 extension personnel will be trained during Q2 (Table 26). The training programs are anticipated to commence in January 2016 once all of the developed materials are printed.

Table 26: List of extension personnel to be trained

Type of Organization	Number of extension Personnel
DAOs from MoA	29
USAID-FED Supported Enterprises	218
USAID FED Supported VSLAs	723
VC Specific Orgs and INGOS	45
Superintendents' Extension Officers	12
Total	1,027

Sub Task 1.4: Youth in Agribusiness

Technical assistance to 25 youth agribusinesses enterprises towards production of high value vegetables and cassava tuber

Provide 25 peri-urban agribusinesses with simplified farmer guides on improved varieties, GAP and IPM for production of high-value vegetables and cassava tubers:

In Q1, USAID FED developed and validated 46 extension materials and farmer guides (21 farmer guides and 25 booklets) for the vegetable and cassava value chains. These materials were officially handed over to the MoA on December 16, 2015. The extension materials will be printed and distributed to various stakeholders in January 2016. The 25 peri-urban agribusinesses will receive copies of these materials and their lead farmers will be trained by USAID FED on how to utilize and disseminate them.

Provide 25 peri-urban agribusinesses with technical assistance, extension services and access to pesticides and chemicals for Integrated Pest Management through agro-dealers:

In Q1, USAID FED continued to provide technical assistance to the 25 peri-urban agribusinesses supporting 500 youth (271 males and 229 females) in Montserrado and Margibi. This assistance was provided through Green Coast Agriculture Program (G-CAP), an LNGO contracted by USAID FED and 25 youth extension aides that were trained by USAID FED and contracted by GCAP in FY15.

By the end of Q1, the 25 agribusiness enterprises put 193 ha of land under vegetable production (Table 27). Nurseries were established for water melon, chili pepper, bitter ball, African eggplant and cucumber. During this period, 16 agribusiness enterprises harvested 10 MT of vegetables from 2 ha. The agribusiness enterprises also received technical assistance on Integrated Pest Management from USAID FED's Horticulture Specialist.

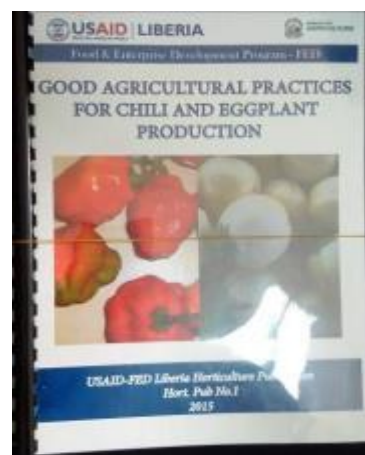


Figure 22: Extension guide on GAP for Chili and Eggplant



Figure 23: USAID FED Horticulture Specialist identifying pests in Naida town youth group site, Toddee district

Table 27: Area under vegetable production

County	FY16 target area	Area under wet season crop	Area under dry season crop	Total YTD (ha)
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	(ha)	production in (ha)	production (ha)	
Montserrado	115	132	33	165
Margibi	10	17	11	28
TOTAL	125	149	44	193

Organize meetings between 25 peri-urban agribusiness pilots and buyers/processors to facilitate market access for their produce:

Vegetable sales in FY16

In Q1, 16 agribusiness enterprises sold 10 MT of assorted vegetables for US\$9,817 to the Monrovia Vegetables Traders Association and Kakata Vegetables Traders Association. Nine other agribusiness enterprises still have their crops in the field. (Table 28) and plan to sell their crops at the Kakata Market and Redlight in Paynesvilles once harvested.

Table 28: Vegetable sales

County	Sales volume in Oct. (Kg)	Sales value in Oct. (US\$)	Hectare (ha) Harvested in Oct.	Sales volume in Nov. (Kg)	Sales value in Nov. (US\$)	Hectare (ha) Harvested in Nov.	Sales volume in Dec. (Kg)	Sales value in Dec. (US\$)	Hectare (ha) Harvested in Dec.	Total sales volume YTD (Kg)	Total sales value YTD (US\$)
Montserrado	2,843	1,707	1.11	3,225	1935	0.72	0	0	0	6,067	3,642
Margibi	3,930	6,175	0.06	0	0	0	0	0	0	3,930	6,175
TOTAL	6,773	7,882	1.17	3,225	1935	0.72	0	0	0	9,998	9,817

Train 25 peri-urban agribusinesses on improved cassava production methods and practices

In Q1, USAID FED identified 200 youth (103 men and 97 women) in 25 clusters across Montserrado County to receive assistance in the production of cassava on 50 ha of land (Table 29). Each of the youth groups will cultivate 0.25 ha of cassava varieties needed by Monrovia cassava processors. Meetings will be organized to facilitate contracts between processors and the youth groups. USAID FED will train the youth groups on cassava production in February 2016.

Table 29: Recruitment of youth farmers for cassava production

County	FY15 youth targets	Number of youth identified in Dec	Male No: %	Female No: %	Number of Ha
Montserrado	200	200	103 (52%)	97 (48%)	50

Support the development of sustainable operations of 126 youth agro-enterprises

Supporting job creation through youth enterprises as transport service providers:

USAID FED procured 49 units of Tuk-tuks (motorbikes with carriers) and intended to distribute these to 49 youth operators earlier on a 50:50 cost-share arrangement. Many youth entrepreneurs desire to own a Tuk-tuk, but are unable to put up the 50 percent cost-share up-front. As such, arrangements were made for them to access 20 percent of the cost as financing from LEAD. However, LEAD required the title of the Tuk-tuk be turned over to them, which USAID FED cannot do because the USAID disposition approval states that the Tuk-tuk will be turned over to the beneficiary. To resolve this issue, USAID FED Management decided to reduce the cost-share of beneficiaries to 30 percent.

By the end of Q1, 34 entrepreneurs paid a total of US\$42,300 (representing 30 percent cost share) towards obtaining all the 49 Tuk-tuk motor bikes (Table 30). A total of 47 Tuk-tuk motor bikes were distributed to the entrepreneurs.

Table 30: Tuk-Tuk distribution

County	Entrepreneurs who have paid cost share	Tuk -tuks paid for entrepreneurs	Total cost share paid in cash (US\$)
Bong	11	13	\$11,700
Montserrado	4	7	\$6,300
Lofa	8	11	\$9,900
Nimba	8	11	\$9,900
Grand Bassa	3	5	\$4,500
Total	34	47	\$42,300

During the same period, the 47 Tuk-tuk motorbikes started operating and have generated a total of US\$28,664 in revenue from transportation of commodities (Table 31).

Table 31: Revenues generated from transport services

County	Entrepreneurs who have started operating	Revenue generated in October (US\$)	Revenue generated in November (US\$)	Revenue generated in December (US\$)	Total cash generated (US\$)
Bong	13	\$567	\$590	\$6,648	\$7,805
Montserrado	7	\$200	\$489	\$3,699	\$4,388
Lofa	11	\$320	\$267	\$6,000	\$6,587
Nimba	11	\$500	\$453	\$6,375	\$7,328
Grand Bassa	5	\$0	\$0	\$2,557	\$2,557
TOTAL	47	\$1,587	\$1,799	\$25,278	\$28,664

Supporting job creation through youth enterprises as power tiller service providers:

In Q1, the 30 power tiller operators supported in FY15 tilled a total of 111 ha of lowlands as part of their investment cost share obligations. In total, these operators provided power tiller services to 745 ha of lowlands or 52 percent of the land allocated under their MoU obligations (Table 32).



Figure 24: Tuk-tuk entrepreneur in Voinjama, Lofa County loading cassava.

Table 32: Power tiller operators

County	Number of power operators	Target cost share area (Ha)	Total area tilled in FY15 (Ha)	Area tilled in October (Ha)	Area tilled in November (Ha)	Area tilled in December (Ha)	Total area tilled YTD (Ha)	Area pending to be tilled (FY16 Lowland Rice) Ha
Bong	10	480	204	40	52	0	296	184
Lofa	9	432	117	0	0	0	117	315
Nimba	10	480	265	19	0	0	284	196
Grand Bassa	1	48	48	0	0	0	48	0
Total	30	1,440	634	59	52	0	745	695

Sub Task 1.5: Improving Human Nutrition

Implement dietary behavior change strategy

Assess impact of pilot diet behavior change strategy through a rapid survey:

An assessment was conducted during this reporting period of the impact of the dietary behavior change nutrition pilot implemented in Nimba County in FY15. A total of 45 lead farmers, extension officers, VSLA group chairs and farmers (34 men and 11 women) were interviewed. The objective of the pilot was to reach more than 7,000 households with behavior change nutrition activities to diversify their diets. These activities included the dissemination of customized lesson plans to 257 lead farmers, development and pre-testing of key messages, mentoring visits and broadcast messaging through radio spots.



Figure 25: USAID FED Nutrition Officer Jonathan Brown pre-testing messages with Lead Farmers in Quayah, Bong County

The assessment results determined that there was an increase in nutrition within the targeted households following USAID FED interventions. This finding was also supported by an analysis provided through a special study on the *Impact of FED intervention on Household Diet Diversity* that was conducted at the end of FY15. Preliminary results from the study show that 22,335 households (or approximately 25 percent of USAID FED beneficiaries supported by the end of FY15) diversified their diets as a result of USAID FED's interventions. Another study on the *Impact of increase in rice production to the economies of the households* showed positive impact on diet diversification especially with increasing purchases of vegetables. Additional surveys were completed on cassava, goats, and vegetable value chains and also showed an increasing trend in the number of USAID FED beneficiaries increasing their procurement of vegetables, fruits, meat, fish, and/or eggs.

Present findings to stakeholders for validation:

The findings of the assessment of the behavior change pilot intervention were presented to 21 stakeholders on October 30, 2015 by USAID FED's Behavior Change Specialist. USAID Liberia, UNICEF, IMC, MCH, ACF and ZOA participated in the presentation.

Refine dietary behavior change strategies and messaging materials to target pregnant women and children below 5 years of age:

Twenty-five messages were developed and pre-tested during this reporting period that focused on pregnant and lactating women as well as infant feeding. These messages were food-specific and action- focused. The messages were successfully pre-tested with 67 individuals (12 men, 55 women) in Nimba, Bong and Lofa counties. In October 2015, seven teaching aids - in the form of simple messages about diet diversity - were developed focusing on behavior change and diet diversity based on the pre-tested messages. USAID FED plans to print 500 copies of these teaching aids and distributed them to lead farmers in USAID FED supported counties in Q2.

Pre-test messaging materials in at least three counties:

In Q1, USAID FED continued to monitor and track implementation of the pilot dietary behavior change activities being implemented by lead farmers in Nimba County. USAID FED's Nimba County Nutrition Coordinator conducted an assessment with seven lead farmers (six men and one woman) from vegetable, goats, and cassava clusters, who have an outreach of 172 group members (105 men and 67 women), to determine how effective messaging was with respect to diet diversity amongst the households of their members. It was reported that 78 percent, or 135 of the 172 households, were diversifying their diets as a result of continuous nutrition lessons provided by lead farmers. Similarly, 67 percent of the households reported consuming more greens, fruits, and vegetables, while 12 percent mentioned they consume more beans, fish and eggs.

In FY16, USAID FED will mobilize 21,292 new beneficiaries (12,250 for rice, 6,000 for cassava and 3,042 for goats). Baselines in terms of the current household nutrition status for these new beneficiaries will be conducted in the next reporting period. These new beneficiaries will be assisted to implement dietary behavior change nutrition activities through their lead farmers, and will receive nutrition messages through posters and flyers during Q2.

Component Two: Stimulate Private Sector Growth and Investment

Task 2: Policy Enabling Environment for Private Sector Growth

Policy Reform

Comprehensive Tax & Investment Incentives Policy Development

USAID FED discontinued its support of the Comprehensive Tax & Investment Incentives Policy due to a lack of interest, and therefore effort, by its partner – the Ministry of Commerce and Industry. The Ministry believes that the present fiscal situation does not warrant the adoption of such policy.

10% Wheat-Cassava Composite Flour Policy Development

The 10% Wheat-Cassava Composite Flour Policy continues to be pursued. The policy aims to provide better income opportunities for farmers and processors in the cassava value chain. USAID FED hired a consultant to develop the policy paper that was submitted to the MoA and MoCI in October 2015 for endorsement to the Liberian government. The policy brief was presented during the MSME National Conference in November 18, 2015.

This policy initiative resulted in the participation of FALAMA Inc., a small cassava processing enterprise based in Liberia to cost-share in the establishment of a 10 MT per day cassava flour processing plant. The MoU has been signed with the enterprise.

Assessment of the National Standards Laboratory of Liberia (NSL) and the development of the Road Map for Sustainability

The assessment and road map were completed in November 2015 and submitted to the USAID in December 2015. USAID commented and, based on these remarks, USAID FED was refined and resubmitted the paper, which is pending final approval. The NSL will use the road map as a guide to achieve sustainable operations and extend the necessary service to various agricultural and agribusiness stakeholders in Liberia.

MoCI Department of Small Business Administration (SBA) Capacity Building in ICT

An international consultant was recruited to undertake an organizational and operational assessment of the MoCI's Department of Small Business Administration. The objective is to identify the weaknesses and constraints in providing effective and efficient services to MSMEs by the department and for it to undergo capability enhancing trainings to effectively respond to the needs of these enterprises. This consultancy will begin the first week of February 2016.

Policy Reform Activities via Technical Working Groups

The President of Liberia signed Executive Order (EO) #73 in December 2015 which superseded EOs # 30 and # 64. EO #73 removes an import tariff on 24 categories of selected agricultural and agribusiness inputs. USAID FED has been instrumental in pushing for its approval and implementation.

In December 2015, the Minister of Agriculture signed the Agricultural policy of "Domesticated ECOWAS Regulations for Fertilizer, Pesticides and Seeds." The adoption of this Ministry level policy is a result of the

collaborative work of West Africa Fertilizer Program (WAFP) and the USAID FED. The USAID FED consultant will start working on the implementing guidelines of the policy in January 2016.

Support to the MoCI Micro Small and Medium Enterprise Conference from November 17-18, 2015

USAID FED supported the Micro Small and Medium Enterprises conference by providing logistical and operational assistance. Liberian President Ellen Johnson Sirleaf opened the conference with remarks focused on the empowerment of small and youth-led businesses. The theme was “From Vision to Implementation: Buying Liberian, Building Liberia,” with a special focus on youth innovation for economic empowerment. USAID FED invited 13 beneficiaries from Nimba, Lofa, Bong, Margibi, and Montserrado counties to attend and exhibit their produce in the conference held at the Monrovia City Hall in Montserrado County. The conference showcased 50 Liberian-owned businesses (MSMEs), through a trade fair exhibition. USAID FED participated as a panelist on the local procurement law topic and presenter of the 10% Wheat-Cassava Composite Flour policy advocacy initiative.



Figure 26: Her Excellency Ellen Johnson Sirleaf visiting USAID FED's booth during the 2015 MSME conference in Monrovia

Subtask 2.1 Access to Financing

Village Savings and Loan Expansion (VSLA)

The VSLAs continue to generate additional investments, provide loans to its members and generate revenues from business enterprises covering four commodities (i.e., rice, cassava, vegetables and goat) in the six target counties. This report highlights results from October and November 2015. The December 2015 data and information will be included in the Q2 FY16 report.

Table 33: VSLA Financial Information, October and November 2015

#	County	Shares investment	Loan disbursed	Members w/ loan	Sales					
					Rice	Cassava	Vegetable	Goat	Total	% share
1	Lofa	69600	61690	655	7650	555	1646	1352	11203	19%
2	Nimba	57845	46900	621	6415	5833	5029	2297	19574	33%
3	Bong	50600	17050	3423	4857	680	3414	606	9558	16%
4	Bassa	48800	29000	421	798	1697	1557	490	4542	8%
5	Montserrado	17965	12525	304	0	0	11824	0	11824	20%
6	Margibi	19965	14250	355	0	0	1787	0	1787	3%
	Total	264775	181415	5779	19720	8765	25257	4745	58488	100%

As shown in Table 24 the FY16 YTD investment shares reached US\$264,775.00 with Lofa registering the highest share of US\$69,600.00 (26percent of total). Loans disbursed were US\$181,415 with Lofa and Nimba representing 60 percent of total disbursement. A total of 5,779 members availed of loans. The top provider was Lofa accounting for 59 percent of the total loaned in the period. Total revenue generated was US\$58,488.00 coming mostly from sales of vegetables (43 percent) and rice (34 percent).

Expanding Embedded Financing

USAID Food and Enterprise Development Program for Liberia

FY2016 Quarter One Report, October-December 2015

Since October 2015, USAID FED together with USAID IBEX continues to assist Selma Agriculture Development Cooperation (SADC) of Lofa to obtain a loan of US\$100,000 from the Afriland Bank under the USAID Development Credit Authority agreement. SADC will use the loan for rice procurement from local farmers. At the time of this report's submission, FED continues to assist SADC procure its loan.

Subtask 2.2: Access to Business Development Support (BDS) Services and Enterprise Service Centers & Promotion of Public-Private Partnership (PPP) to Benefit Feed the Future Objectives

Supporting BSPs to establish ESCs

The BSP contract ended in December 2015 at which time the encoding and analyses of the data and was completed. The data analysis was conducted in order to determine the impact of USAID FED's interventions on the profitability of 22,205 assisted MSMEs using 1,000 MSMEs as sample set. To fill up the gap created by the exit of BSP and to continue the services provided to the MSMEs, USAID FED is supporting the establishment of an Enterprise Service Center (ESC). The target is to establish the ESC by January 2016.

Promotion of Public-Private Partnership (PPP) to Benefit Feed the Future Objectives

USAID FED continues to facilitate the approval of the USAID GDA program for Wience and Organic Matter Corporations intended to expand the operations of these two enterprises. In the latter, the total value of the company's resource contribution is US\$468,068 and this is expected to benefit about 5,000 small holder farmers.

Subtask 2.3: Women Participation in Agribusiness

Women Owned & Operated Business Incubation

Women-owned Enterprise Mentor, Josephine Greaves mentored nine women-run MSMEs in Nimba, Margibi, and Montserrado counties. Additional beneficiaries included the implementation of business plans for 26 business enterprises and the development of financial plans for 9 MSMEs. USAID FED plans to continue this type of support through a business mentorship program.

Component Three: Build Local Technical and Managerial Human Resource Capability

FY15 Activities Continue

Establish Performance Management System at the CoEs

On October 12, 2015 USAID FED Performance Management and Systems Development Consultant Dr. John Sellu was mobilized and dispatched to the field to begin working with and training top management, administrative and other working staff of the four Centers of Excellence. He commenced his first week of assignment at the BWI from Oct 12-17, 2015 where he presented an overview of the workshop and discussed the Professional Standards for Teachers in Liberia with the 10 participants (8 males and 2 females). He also distributed copies of PMS booklets to each participant during the workshop. His assignment in the field continued to Grand Bassa and Nimba County Community Colleges through October 31, 2015 and was completed on November 7, 2015 at the Lofa County Community College.



Figure 27: Systems Development Consultant Dr. John Sellu delivering training at the BWI

At GBCC a total of 13 faculty and administrative staff participated in the workshop. During the workshop it was realized that about 90 percent of the participants admitted they did not hold a job description and 60 percent admitted they never received a letter of appointment during their employment with the institutions.

Establishment of standardized Agricultural Science Labs and training of instructors and technicians

On November 24, 2015, USAID FED in collaboration with the Government of Liberia (GoL) inaugurated a modern Science Laboratory at the Lofa County Community College Voinjama, Lofa County worth approximately US\$70,000.

The Science Laboratory, outfitted with USAID FED procured microscopes, beakers, conical flasks, tripods, and burettes among other pieces of equipment will aid the delivery of the National Diploma in Agriculture (NDA) and enhance practical learning. Under the agreement between the Lofa County Community College and USAID FED, LCCC provided the building to house the facility, while USAID FED supported the renovation of the building as well as the purchasing and installation of the equipment. USAID FED trained lab technicians to provide quality services for the students. The fully equipped Science Lab will strengthen the Center of Excellence (CoEs) capacity to provide quality education to generate the skilled workforce needed for the growth of the agriculture sector in Liberia.



Figure 28: The strategic planning consultant delivering training at LCCC

Develop and implement 3-yr strategic plan including priority enterprises to be established at the CoEs

On October 19, 2015 Dr. Dexter Merchant, USAID FED consultant for Strategic Plan, Finance, and Enterprise began a five-day Strategic Plan, Finance and Enterprise Development workshop..

During the meetings, Dr. Merchant asked a series of questions about the status of the institutions, such as “where are you now as an institute and where do you wish to be in the next three years.” He also asked for strengths, weakness and challenges they face as an institute. Dr. Merchant also met with various departments in the college including Finance, Human Resources, Admissions and Agriculture to ask about their strength and weakness.

Dr. Merchant probed into questions like the establishment of the college, the institutional mission and vision statements, institutional financial standing, student enrollment rates, and partner organizations. He also met with individual top management staff in continuation of his SoW.

FY16 Work plan Activities

Roll out the National Diploma in Agriculture in all Four CoEs

As of September 2015, the total number of students enrolled in the NDA program was 812. Since students in other departments at the CoEs also benefit from the USAID FED supported academic facilities, the number of beneficiaries will exceed the LOP target of 2,500 (see Tables 34 & 35).

CoE Enrollment Data as at September 2015:

Table 34: Agricultural Department & NDA student enrollment

Center Of Excellence	Male	Female	Total
Grand Bassa Community College	149	85	234
Nimba County Community College	82	60	142
Lofa County Community College	167	45	212
Booker Washington Institute NDA	40	7	47
BWI Regular and AVTP	131	46	177
Grand Total	569	243	812

Table 35: Institution enrollment data reflecting total number of students per institution excluding the Agriculture Department

Center Of Excellence	Male	Female	Total
Grand Bassa Community College	535	471	1006
Nimba County Community College	303	145	448
Lofa County Community College	400	155	555
Booker Washington Institute	893	246	1,139
Grand Total	2131	1017	3148

In October of Q1, USAIDFED recruited five consultants to train the CoEs staff in several disciplines in order to enhance the effective delivery of the NDA program. However, due to other competing engagements two of the consultants, Farm Woodland Management Specialist and Animal Scientist, declined the offers. As a result, USAID FED only mobilized two consultants - Soil Scientist, Mr. Peter Korvah and Agronomist, Mr. Franklin Philips -to the field to train the CoEs instructors on the use and application of modern agriculture techniques for an efficient and effective delivery of the new NDA program. The training began on November 2, 2015 at LCCC with five faculty members participating along with eight NDA students who also voluntarily participated. The

training continued at the Grand Bassa, Nimba County Community Colleges and the BWI focused on particularly soil science and crop science based on the needs assessment.

Professor Franklin Philips conducted a five-day lecture session with NDA instructors on the following areas:

- Fertilizer application techniques;
- Pest management techniques;
- Techniques in using the knapsack sprayer;
- Factors that affect the availability of nutrient in the soil; and
- Fertilizer calculation.

Professor Philips also took the NDA students to the field and taught them how to use the knapsack sprayer can.

Training description (Soil Science)

The training comprised of description, classification and evaluation of soils for agricultural purposes. The description of soil focused on physical properties, which largely determine the suitability of the soil.

Training Objectives

The objective of the training was to strengthen the capacity of agriculture instructors in soil science and teach them how to characterize and note key differences in soil so as to make better matches between soil and the land. A land use that is suitable must not only be profitable for the short run but profitable on a sustained basis. The training is being carried throughout the four Centers of excellence to ensure the enhancement and successful delivery of the NDA program.

The laboratory technicians at the four CoEs have been trained on the use and management of lab facility and equipment. On, November 23, 2015, Mr. Emmanuel Lincoln, USAID FED Science Laboratory Trainer commenced training of laboratory technicians at the Lofa County Community College. The four day training of LCCC technicians ended on November 27, 2015. The training program continued at the BWI, the GBCC and will be completed at the Nimba County Community College in January 2016.

The training topics include:

- Soil sampling methods



Figure 29: Agronomist, Franklin Philips observing the practical pesticide spraying method calibration at the GBCC vegetable garden.



Figure 30: Soil Scientist, Peter Korvah, observing GBCC instructors and lab technicians in conducting soil profile analysis.



Figure 31: Emmanuel Lincoln USAID FED Senior Soil Scientist delivering training at the science lab at LCCC.

- Soil Ph determination;
- Soil nutrient analysis;
- Measurement of electrical conductivity; and
- Soil bulk density determination.

Training participant groups at each institution were comprised of one laboratory technician, one assistant lab technician and one soil science instructor. At the end of each training exercise, the participant groups assume the full responsibility of maintaining and running the Soil Science Labs.

The objective of the training was to work with the soil science lab technicians at the four CoEs (BWI, GBCC, LCCC and NCCC) to help strengthen their capacity in both laboratory and field settings using different types of soil lab equipment to perform various forms of soil testing activities. The training also sought to document and report on the diverse training delivery modes carried out and recommend strategies required by the technicians for onward improvement in their skills in soil science lab operations to facilitate an effective and sustained delivery of the NDA curriculum and income generation by the CoEs.

Enhancing availability of textbooks and reference materials for the NDA

USAID FED began the identification of additional textbooks required for the Centers of Excellence institutions. During the NDA year II syllabi and lesson planning session held at the Nimba County Community College in July 2015, 10 additional text books were identified and recommended to be procured for the four USAID FED partner CoEs institutions (five copies of each textbook to be distributed to each CoE). The text books will help provide support to the new NDA curriculum as well as to the students and faculties of the institutions in rolling out the program.

Completing basic facilities needs to enhance learning

December 2, 2015 USAID FED mobilized and dispatched an Architecture and Engineering/ Construction Needs Assessment Consultant, Mr. Mack Coleman, to the field to commence an assessment of the libraries at the four partner institutions. The consultant began his assignment at the BWI and continued onto the Grand Bassa, Lofa and Nimba Community Colleges. This assessment and provision of all relevant tender documents is expected to be submitted and finalized by USAID FED Sr. Engineer in January 2016. As a result of these documents, USAID FED will in begin the recruitment of construction firms to complete the rehabilitation of the libraries at these CoEs.

Promoting Learning by Doing in Partnership with Private Sector

Internship programs were established at the four institutions. Technical assistance including monitoring by the USAID FED staff continues in FY16, beginning Q2.

Building the Capacity of CoEs to generate additional funding and to manage their finances

On October 12, 2015, USAID FED mobilized and dispatched its Grant Proposal Writing Specialist, Mr. Nathaniel Sikeley, to the field to conduct workshops and train senior administrators at the four CoEs. The workshops began at the Lofa County Community College where 11 senior staffs from all departments attended. The facilitator also helped the institution revise past proposals and encouraged LCCC administration to appoint a committee responsible for grants development.

Continuing Support to Agro-Enterprises Established in FY14/15.

Louisiana State University is in the process of finalizing scopes of works and schedules for four STTAs to mobilize in January 2016 for assignment to Liberia.

Grand Bassa Community College

In Q1, tomatoes planted in the rain shelter at GBCC reached their full fruiting stage and were harvested on a weekly basis for a period of two months.

The Sale Manager, Mr. George Williams reported a total of \$14,700 LD or US\$171.00 from the sales of tomatoes during this reporting period.

The bitter ball and eggplant are almost completed and new nursery preparation is underway. The sale of bitter ball and pepper is \$5,550.00 LD or US\$65.00.

In December 2015, \$21,250 LD or US\$236.00 was calculated as proceeds from the vegetable enterprise.

Nimba County Community College

Compost Enterprise

NCCC has not commenced the making of compost, though the college has received a wood chipper, compost thermometer and moisture meter. According to the NCCC Administration, the roof of the compost building has not been renovated since it got damaged during a thunderstorm following the completion of construction. An appeal was made last semester to repair the damaged roofing but has not been done.

Goat Enterprise

NCCC began the enterprise in July 2015 with eight goats and now has 37 goats, including 34 Nannies and 3 Billies as of October 7, 2015. According to the NCCC goat technician, all the goats are in good health.

Cassava Enterprise

NCCC Agriculture Department began the sale of cassava planted last year with support from FED on a 4.5ha of land. The amount of \$3,100 LD or US\$36.00 has been realized from the sales. The sale of cassava is presently ongoing on the main campus of the college.

Lofa County Community College

The NDA program at LCCC has been very successful during the second semester of the first year with students adhering and participating in the 50 percent of the practical. As part of this task, the VAEO continues to provide support to the successful running of the NDA program at LCCC by monitoring NDA teachers to make sure they follow the lesson plans and syllabi. LCCC has received the semester I year II NDA course syllabus from USAID FED and this has been very helpful in running the program at LCCC. Students have been involved in group presentation, in most of their NDA classes.



Figure 32: LCCC students carry out their practical exercises on the demo farm.

As part of the 50 percent practical exercise stated in the NDA curriculum, NDA students started preparing the Demo farm for transplanting of the second batch of rice seedling that was delivered by the Farm Manager in December 2015.

On November 19, 2015, USAID FED procured 25 goats to support the establishment of farm enterprises at LCCC. The procurement of the 25 goats is part of USAID FED's support under the CoE Enterprise Development Activity. The goats were procured from four of USAID FED supported goat' communities: Melekie, Kollifawala, Waterfall and Gbaota in Bong County. The 25 goats were procured by the USAID FED goat team and treated by the USAID FED Goat Officer in Bong County and later quarantined at the Melekie Goat Shelter. It was reported by the Bong County Team that three of the goats, including two billies and one nanny, died over night while they were quarantined in Melekie Goat shelter. The remaining 22 goats have been officially turned over to the Administration of the college.

Monitor and Provide Technical Support to the Establishment and Operation of Advisory Committee

The task will commence in Q2 however, the challenge remains that there is no allocated budget for implementation of the task at the institutions.

Component Four: Cross-Cutting Activities

Task 4.1: Communications/Knowledge Management

USAID FED Media Stories

USAID FED was in 32 media reports during quarter one of FY16:

1. Women Voices -USAID FED, ROSNA dedicate cold storage facility in Yekepa
2. Daily Observer- USAID FED dedicates cold storage facility
3. Success Forum- USAID FED equips Nimba College
4. Inquirer- USAID FED, GOL inaugurate science lab at Nimba College
5. New Democrat- Nimba gets modern lab equipment
6. News- USAID FED inaugurates science laboratory
7. Daily Observer-Modern science lab inaugurated in Nimba
8. Liberia News Agency- USAID FED inaugurates US\$245k projects in Nimba
9. New Republic- USAID FED, ROSNA inaugurate cold storage facility in Nimba
10. GNN- USAID FED inaugurate 245k projects in Nimba
11. LINA- NCCC gets 245k soil science lab from USAID FED
12. Modern Soil Science Lab inaugurated in Nimba- Daily Observer
13. LCCC Empowered with Science Laboratory-Insight
14. In collaboration with GOL: USAID FED Inaugurates Science Lab facility at Lofa County Community College-The Heritage
15. USAID FED in collaboration with GOL Inaugurates Science Lab Facility at the Lofa County Community College-The New Republic
16. Mayor Farmers Association to harvest rice for sale-Liberia News Agency
17. Inauguration of the Nimba County Community College Science Laboratory-ELBC Radio
18. Mayor Farmers Rice Harvest-Liberia National Television (LNTV)
19. LCCC Science Lab Inauguration-Liberia National Television (LNTV)
20. USAID FED Dedicates Soil Lab in Lofa-Daily Observer
21. USAID FED Dedicates US\$70 Lab in Lofa-GNN
22. USAID FED Dedicates US\$70 Lab in Lofa-Liberia News Agency
23. USAID FED Dedicates Soil Lab in Lofa-Daily Observer
24. Liberian Gov't, USAID launch new agriculture program- Africatime.com
25. USAID FED Highlights Achievements-The new Dawn Newspaper
26. Farmer Calls for Extension of USAID-FED Program-Liberia News Agency/MICAT Website
27. Farmers Want 5 years USAID FED Program-Daily Observer
28. GOL, USAID FED Launch New Agriculture Instrument- Daily Observer
29. Rice Yields Pleases Nimba Farmers-Daily Observer
30. USAID FED Increases Production in 4 food value chains- Daily Observer
31. Who says Liberia Can't Grow Its Own Rice?-Daily Observer
32. Lofa Can Feed Liberia, if farmers get adequate support- Daily Observer

Task 4.2: Environmental Compliance

Consistent with USAID's guidelines on small scale construction in Africa, USAID FED's Environmental Monitoring and Mitigation Plan (EMMP) forbids the construction of water control structures in environmentally sensitive areas and ensures that good practice design and operation standards are observed for new construction and rehabilitation works.

In order to ensure compliance with these requirements, USAID FED's Environment Assistant and Irrigation Specialist, on October 12, 2015 visited Grand Bassa County, where they inspected and verified three wooden spillways in Kpelleh Town, District # 2 and in James Miller Town and Garkpee in District # 3.

The team next travelled to Naimue, Gwenimah, Duita, Molly-Ta, Yowee-Farvey, Belemu#1 and Gbarngasiaquelleh in Bong County, and finally inspected and verified one site in Senga, Lofa County.

During the period under review, the team inspected and verified a total of 17 wooden spillways constructed by the Tallobenku Construction Group of Companies (TCGC). The 17 wooden spillways included three in Grand Bassa, six in Nimba, seven in Bong, and one in Lofa County.

The team also visited three Rice Seed Multiplication (RSM) sites – two lowland and one upland. The Mayor Farms, located in Foya District, Lofa County, has good crop stand and will soon be ready for harvest. The verification exercise was conducted in Bong and Lofa Counties from October 12 to 26, 2015.

Four Rice Seed Multiplication (RSM) sites were also visited in Grand Bassa and Nimba Counties – two lowland and two upland. One of the lowland sites in Bonadine, Saclepea Mah District, has good crop stand and will be ready for harvest very soon. No upland was found to have crop standing up.

A component of the FY16 environmental monitoring plan seeks to evaluate the extent to which project beneficiaries or farmers are complying with best practices or are adopting mitigation measures outlined in USAID/FED's EMMP (such as fertilizer use, environmental and human health safeguards, use of PPE, etc.). During this reporting quarter, compliance by beneficiaries was evaluated by carrying out a five-day assessment from November 23 to 27, 2015 in Grand Bassa County. It was determined that most of the USAID FED farmers are following the best practices, however, additional refresher training is needed for some farmers to follow best practices.

Goat sites:

At the Zardun Goat Site in Grand Bassa District #3, the team ascertained from the lead farmer, Alphonso Saplay, about prevailing practices related to the safe disposal of manure from goats, disposal of used syringes, the availability of safe drinking water, and other key environmental issues. Mr. Saplay explained that manure from goats is regularly cleaned up and stored in a barrel for use by vegetables farmers as organic fertilizer for their crops. Safe drinking water is received from a community-constructed pump. Syringes used to deworm goats are usually disposed of in pit latrines.

The USAID/FED team also interviewed lead farmers at the Grand Bassa County, Joe Town, Morris Town, Aquoi Village, and Borbor Town Goat Sites, where lead farmers responded in a similar manner.

The consistent responses by farmers on safe disposal of these waste is a clear indication that farmers are equipped with the necessary information regarding safety, hygiene, and best practices and are following best practices in implementing their activities.

Rice sites:

In November 2015, USAID FED environmental compliance staff visited the Lofa Gio Town and Koiwah Town Rice Sites. In Gio Town, William Flomo, the lead farmer, spoke about using the exact / proper amount of fertilizer to be applied per hectare on the site. He said proper usage mitigates the risk of misapplying and misusing fertilizer, which could cause significant environmental impact in both up and lowland rice fields. Flomo also spoke about the impact of standing water in rice fields and personal protective issues on the farm. Flomo has excellent knowledge about safety and environmental issues. The move to interview farmers about

environmental and safety issues is highly important to ensure that farmers are aware of best management practices.

In Koiwah Town, the lead lowland farmer is George Miller. He talked about the impact of deforestation and shifting cultivation practices. He also spoke about their impact on the environment.

Even though some lead farmers have adequate knowledge about environmental issues, there is still scope for increased sensitization for lead farmers and farming groups.

Cassava sites:

The Grand Bassa County Henry Town Cassava Site was monitored by the USAID/FED environmental team, as well. Samuel Henry, the lead farmer, emphasized the need to avoid sloping lands when selecting cassava sites, due to the potential for serious land degradation from the impact of erosion. He also spoke about pest control methods. According to him, he usually applies local pest control methods just in case of any outbreak on his farm, instead of pesticide use.

Task 4.3: Monitoring & Evaluation

During the quarter, M&E staff along with the GIS Officer produced nine maps. The maps include horticulture cluster maps for counties in which the vegetable value chain interventions take place. In support of the vegetable value chain process, vegetable rain shelter location maps in the various counties were also produced.

On the cassava value chain, three cassava maps were produced during the quarter. They included maps for cassava processing centers, cassava nursery sites and cassava cluster maps for counties of USAID FED's cassava value chain intervention.

Lowland and upland rice value chain maps were also produced with the counties. Rice related maps include locations of rice business hub, seed multiplication/water management and irrigation sites and UDP+SRI trial sites maps for the various counties.

Task 4.4: Market Development Fund Management

MDF Budget Estimates for FY2016

During this quarter, the Market Development Fund (MDF) supported activity design and budget allocation for 13 activities across the 3 FED Components. Three additional activities designed by the FED M&E team will support MoA and measure specific impact of select FED objectives. Another 35 activities are under development and will be rolled out in January 2016 to execute the FY16 Work Plan. MDF expended an estimated \$1.65 million in Q1 of FY16. Additionally, \$1.2 million was obligated for ongoing activities.¹ The obligations largely reflect support to LNGOs which provide technical assistance to farming groups in six counties, ongoing education and training for VSLAs and the completion of construction subcontracts, such as the Rice Business Hubs and CoEs. The total budget estimated for FY16 program activities is \$6,245,515, leaving FED with a remaining total of \$4,595,515 to expend before the end of the project.

The following table summarizes activities with completed design and approved budgets. Those activities with ongoing implementation design follow further below:

¹ This figure reflects an estimate based on end-of-year reporting; final Q1 financials will be available by request January 31, 2016.

MDF Budget Estimate FY16 Work Plan	
Component	Budget
Component 1	\$1,178,293
Component 2	\$1,416,730
Component 3	\$344,400
M&E	\$450,381
Obligations	\$1,205,711
FY16 Total Estimate	\$6,245,515
Q1 Expenditures	\$1,650,000
Remaining MDF FY16 Budget	\$4,595,515

Component One Budget FY16		\$1,178,293	
Rice Value Chain			
Activity Number	Activity Title	Estimated MDF Budget	Financial CLIN
Sub-task 1.A.1.2.1 Sub-task 1.A.1.2.2	Procure and distribute 45 metric tons of NERICA -14 seeds for planting on 750 ha of new uplands Train at least 175 farming groups on improved technologies in producing rice in the upland	\$105,375	CLIN01-MDF-0225
Sub-task 1.A.2.2.1 Sub-task 1.A.2.2.2	Procure and distribute 40 metric tons of NERICA L-19 seeds for planting on 1,000 ha of new lowlands Train 233 farming groups on improved technologies in producing rice in the lowlands	\$99,000	CLIN02-MDF-0226
Task 1.A.3.2	Support 2 aggregators with trucks on cost-share to support timey and reliable aggregation and transportation of paddy rice	\$130,000	CLIN02-MDF-TBC

Sub-task 1.A.3.1.2	Train 42 farming groups on the UDP+SRI as technology for the second cropping	\$10,000	CLIN02-NEW-TBC
Task 1.A.4.1	Provide parboiling tanks to six rice business hubs	\$1,800.00	CLIN02-NEW-TBC
Task 1.A.4.2	Provide mechanical dryers to six rice business hubs	\$6,000.00	CLIN02-NEW-TBC
Task 1.A.4.3	Train six rice business hubs on how to operate and maintain their parboiling equipment and mechanical dryers	\$5,000.00	CLIN02-NEW-TBC
Task 1.A.4.3	Assist Fabrar Liberia Inc. to secure and install an industrial parboiling system	\$50,000.00	CLIN02-NEW-216
Subtotal		\$407,175.00	
Contingency - 10%		\$40,717.50	
Rice Value Chain Subtotal		\$447,892.50	
Cassava Value Chain			
Activity Number	Activity Title	Estimated MDF Budget	Financial CLIN
Sub-task 1.B.1.2.1	Train at least 213 lead farmers on GAP, ISFM, harvest and post-harvest practices and improved technologies	\$15,000.00	CLIN01-MDF-TBC
Sub task 1.B.1.2.2	Establish 400 hectares of demonstration plots showcasing improved cassava varieties and ISFM	\$60,000.00	CLIN01-MDF-TBC
Task 1.B.3.1	Support at least 5 new micro-processors in Grand Bassa County to upgrade their processing and storage capacities through cost-share agreements	\$40,000.00	CLIN01-MDF-228
Task 1.B.3.2	Provide additional hardware support to existing cassava processors (micro and small)	\$10,000.00	CLIN01-MDF-0229
Task 1.B.3.4	Establish an industrial size processing facility with an investor through cost-share agreement	\$100,000.00	CLIN01-MDF-0224
Subtotal		\$225,000.00	

Contingency - 10%		\$22,500.00	
Cassava Value Chain Subtotal		\$247,500.00	
Horticulture Value Chain			
Activity Number	Activity Title	Estimated MDF Budget	Financial CLIN
Task 1.C.2.2	Rehabilitate FY14 rain shelters to improve ventilation and to reduce crop losses due to heat	\$6,000.00	CLIN02-MDF-220
Task 1.C.3.2	Provide technical assistance to support export of vegetables to European Union markets	\$15,000.00	CLIN02-MDF-221
Subtotal		\$21,000.00	
Contingency - 10%		\$2,100.00	
Horticulture Value Chain Subtotal		\$23,100.00	
Goat Value Chain			
Activity Number	Activity Title	Estimated MDF Budget	Financial CLIN
Task 1.D.1.2	Train 3,928 new beneficiaries on herd management practices and mineral salt lick fabrication.	\$12,000.00	CLIN01-MDF-TBC
Task 1.D.2.3	Cost share with 20 integrators on establishing logistics and link them to larger traders and/or abattoirs.	\$30,000.00	CLIN01-MDF-TBC
Task 1.D.3.2	Renovate the quarantine facility at CARI to be suitable for housing the nucleus breeding herd.	\$30,000.00	CLIN01-MDF-TBC
Task 1.D.4.1	Conduct PPR vaccination campaign in USAID FED-supported counties.	\$130,000.00	CLIN01-MDF-TBC
Subtotal		\$202,000.00	
Contingency - 10%		\$20,200.00	
Goat Value Chain Subtotal		\$222,200.00	
Input Supply			
Activity Number	Activity Title	Estimated MDF Budget	Financial CLIN
Task 1.2.1.2	Pilot commercial distribution of rice seed with the private sector.	\$30,000.00	CLIN01-MDF-TBC

Task 1.2.2.3	Promote adoption of fertilizer and ISFM through targeted awareness campaigns.	\$5,000.00	CLIN01-MDF-TBC
Task 1.2.3.3	Produce soil maps and distribute to relevant information access points.	\$5,000.00	CLIN01-MDF-TBC
Task 1.2.3.4	Provide TA to the CoEs to promote fee-based soil testing using the science labs.	\$3,000.00	CLIN01-MDF-TBC
Subtotal		\$43,000.00	
Contingency - 10%		\$4,300.00	
Input Supply Subtotal		\$47,300.00	
Extension Support			
Activity Number	Activity Title	Estimated MDF Budget	Financial CLIN
Task 1.3.1.1	Print and disseminate 3,800 extension materials and 194,000 farmer guides to information access points.	\$120,000.00	CLIN01-MDF-TBC
Task 1.3.1.2	Train extension personnel on the use of extension material and farmer guides.	\$15,000.00	CLIN01-MDF-TBC
Subtotal		\$135,000.00	
Contingency - 10%		\$13,500.00	
Extension Subtotal		\$148,500.00	
Youth			
Activity Number	Activity Title	Estimated MDF Budget	Financial CLIN
Task 1.4.1.3	Task 1.4.1.3 Train 25 peri-urban agribusinesses on improved cassava production methods and practices	\$10,000.00	CLIN01-MDF-TBC
Task 1.4.1.4	Task 1.4.1.4 Provide 25 peri-urban agribusinesses with improved planting materials (cassava cuttings) based on varieties preferred by processors	\$5,000.00	CLIN01-MDF-TBC
Subtotal		\$15,000.00	
Contingency - 10%		\$1,500.00	
Input Supply Subtotal		\$16,500.00	
Extension Support			

Activity Number	Activity Title	Estimated MDF Budget	Financial CLIN
Task 1.5.1.6	Pre-test messaging materials in at least three counties	\$3,000.00	CLIN01-MDF-TBC
Task 1.5.1.7	Implement enhanced messaging to the three other Counties of USAID FED (Bong, Grand Bassa, and Lofa) to improve diet diversity	\$20,000.00	CLIN01-MDF-TBC
Subtotal		\$23,000.00	
Contingency - 10%		\$2,300.00	
Extension Subtotal		\$25,300.00	

Component Two Budget FY16		\$1,416,730	
Task 2: Enabling Policy Environment for Private Sector Growth			
Activity Number	Activity Title	Estimated MDF Budget	Financial CLIN
Activity 2.0.2	Policy Reform - 10% Cassava Composite Flour Policy Development	\$12,000	CLIN02-NEW-TBC
Activity 2.0.3	Support to the MoCI Micro, Small and Medium Enterprise (MSME) Conference	\$46,474	CLIN02-MDF-0103
Activity 2.0.5	MoCI Department of Small Business Administration Capacity Building in ICT	\$24,310	CLIN02-NEW-TBC
Activity 2.0.7	Support for World Food Day	\$5,445	CLIN02-MDF-0104
Activity 2.0.8	Legislation Adoption (Seed, Fertilizer, Pesticide)	\$10,000	CLIN02-NEW-TBC
Estimated Total MDF Budget Task 2: Enabling Policy Environment for Private Sector Growth		\$98,229	CLIN02
Sub-task 2.1 Access to Credit and Business Development Services			
Activity Number	Activity Title	Estimated MDF Budget	Financial CLIN
Activity 2.1.1	Village Savings and Loan Expansion	\$424,097	CLIN02-MDF-0061
Activity 2.1.4	Expand Embedded Financing	\$100,000	CLIN02-NEW-TBC

Activity 2.1.5	Support to youth Entrepreneurs to Access (Tuk Tuks)	\$20,000	CLIN02-NEW-TBC
Estimated Total Budget MDF Sub-task 2.1 Access to Credit and Business Development Services		\$544,097	CLIN02
Sub-task 2.2 Access to Business Development Support (BDS) Services and Enterprise Service Centers & Promotion of Public-Private Partnership (PPP) to Benefit Feed the Future Objectives			
Activity Number	Activity Title	Estimated MDF Budget	Financial CLIN
FY15 - To END	Access to Business Development Services and Enterprise Service Centers	\$334,404	CLIN02-MDF-0062
Activity 2.2.1	Supporting BSPs to Establish ESCs	\$420,000	CLIN02-NEW-TBC
Estimated Total Budget MDF Sub-task 2.2 Access to Business Development Services and Enterprise Service Centers		\$754,404	CLIN02
Estimated C2 Budget Contingencies		\$20,000	N/A

Component Three Budget FY16		\$344,400	
Activity Number	Activity Title	Estimated MDF Budget	Financial CLIN
3.2.1	Promote NDA and increase number of students enrolled in NDA Program	\$5,000	CLIN03-NEW-TBC
3.2.2	Promote Ag Progress Day to show case their agriculture products	\$6,000	CLIN03-NEW-TBC
3.2.3	Developing Instructors' capacity to roll out the NDA Program through training	\$80,000	CLIN03-NEW-TBC
3.2.4	Addressing the issue of inadequate instructors at the CoEs	\$1,000	CLIN03-NEW-TBC
3.2.5	Enhancing availability of textbooks and reference materials for the NDA	\$30,000	CLIN03-NEW-TBC
3.2.6	Completing basic facility needs to enhance learning	\$80,000	CLIN03-MDF-060

3.3.0	Promote learning by doing in partnership with private sector	\$10,000	CLIN03-NEW-TBC
3.4.1	Work with CoEs to generate additional funding	\$10,000	CLIN03-NEW-TBC
3.4.2	Continuing support to Agro-Enterprises established in FY14/15	\$120,000	CLIN03-NEW-TBC
3.5.0	Strengthening the organizational and financial systems of the CoEs	\$2,400	CLIN03-NEW-TBC
Estimated C3 Budget Contingencies		\$10,000	N/A

Component Five: Management & Operations

During the reporting period from October—December 2015, USAID FED operations accomplished the following:

5.0 PROJECT MANAGEMENT AND ADMINISTRATION

- Delivered 13 Tuk Tuks to Nimba, Montserrado, Grand Bassa and Lofa Counties
- Received 10 new laptops from the Home Office
- Received two Nissan Hard body Pick-up trucks (1 flat bed and 1 double cap) and a 2 Nissan Patrol SUVs from Global Communities

Procurement

- A total of sixty -three (63) Purchase Orders were created and issued to vendors for purchase of project goods & services.
- Replaced D-Link Access point with six (6) Cisco Air-CAP3702I-A-K9 Aironet wireless access point ceiling mountable for Monrovia office .

ICT

- Internet Service was re-competed because the current contract end date was December of 2015. The previous ISP, Novafone, was again awarded the bid with an improved agreement that terminates August 2016.
- ICT setup computer and accessories in the Soil laboratory on the BWI Campus.
- New replacement servers and access points were requested for the County Offices. These servers and equipment have been received and deployment starts January of 2016 in the field offices.
- ICT assisted Component 3 with ensuring the Community Colleges in Grand Bassa, Lofa, and BWI and Nimba counties have fiber installations from Novafone. Lofa and Nimba Community College networks were setup.
- ICT developed close down plans for the Field and the Monrovia Offices.

Finance

- Invoices to USAID for the first quarter of FY16 decreased by 2.3% from the previous quarter, from US\$4,464,212.70 to US\$4,359,585.22. Costs to date amount to \$59,705,608.05, which is 79.61% of the US\$74,996,658 contract ceiling and 90.28% of the current obligated amount of \$66,131,035.73.

Human Resources

Personnel Movement:

LTTA International

- Lee Rosner, COP

LTTA CCN Staff – 4

- 2 Drivers
- County Manager, Lofa
- County Manager, Nimba

Short-Term ICA Contractors –25

- Senior Engineer
- 4 Drivers
- Data Entry Clerks, Comp 2 – 2
- Horticulture Extension Officers – 4
- Power Saw Operators – 3
- Women in Business Mentor – 1
- Consultant, A&E Needs Assessment – 1
- Consultant, Soil Science Technician – 1
- M&E Coordinator, Nimba -1
- Cassava Cutters – 3
- Cassava Harvesting Laborers – 2
- Nutrition Consultant-1
- Communications Specialist - 1

Ongoing Recruitments – 3

- Data Clerks, M&E Unit - 3

Other ongoing HR activities:

- Calculation of monthly salaries and Over Time
- Preparation of LRA payments of tax for Local Staff
- Enhanced monitoring of leave and absence management
- Management of PMP for staff when due – more than 13 completed this quarter, including some from 2014.
- Monitoring of Stationery and supplies for the Office
- Ensuring cleanliness of office premises

Promotions – 1

- Solomon Gbartoe – From Driver to Driver/Logistics Assistant

Resignations – 4

- Senior Engineer
- Communications Specialist
- M&E Assistant
- Rice Officer
- Component 2 Lead
- Chief of Party
- DCOP/FAM
- Inputs Supply Specialist

Terminations/Redundancy – 9

- Radio Specialist
- Irrigation Specialist
- Extension Officers – 3
- Enterprise Development Assistants – 3
- Driver, Bong County

Arrival of new STTA - 3

- Amanda Scannell – Procurement & Inventory Specialist
- Alison Gardner – Behavior Change Specialist
- Annie Baldrige – NSL Assessment Specialist