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FOOD AND ENTERPRISE DEVELOPMENT PROGRAM FOR LIBERIA (FED)

THIRD QUARTERLY REPORT: APRIL - JUNE 2012



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COVER PHOTO:

Female farmers carrying on the transplanting of rice at the Doumpa project site.

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.

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ACRONYMS

BEI	Boima Engineer, Inc.
BWI	Booker Washington Institute
CARI	Center for Agriculture Research Institute
CCN	Cooperating Country National
CDA	Curriculum Development Analyst
COP	Chief of Party
DAI	Development Alternatives, Inc.
DCOP	Deputy Chief of Party
ED	Enterprise Development
EDS	Enterprise Development Specialist
FBOs	Farmer Base Organizations
FED	Food and Enterprise Development
HR	Human Resource
IFDC	International Fertilizer Developmental Center
IITA	International Institute for Tropical Agriculture
IPM	Integrated Pest Management
IR	Intermediate Results
ISFM	Integrated Soil Fertility Management
IT	Information Technology
LSU	Louisiana State University
LTTA	Long-Term Technical Assistant
M/SME	Medium and Small Medium Enterprise
MDF	Market Development Fund
MFI	Micro-Finance Institutions
MoA	Ministry of Agriculture
MOF	Ministry of Finance
MOU	Memorandum of Understanding
NCCC	Nimba County Communication College
NGOs	Non-Governmental Organizations
PIR	Project Intermediate Results
PUA	Peri Urban Agriculture
RFP	Request for Proposal
RRF	Right and Rice Foundation
SMEs	Small Medium Enterprises
SOW	Scope of Work
SP	Samaritan's Purse
STTA	Short-Term Technical Assistant
TAMIS	Technical and Administrative Management Information System
TOR	Term of Reference
UD	Purea Deep Placement
UL	University of Liberia
USAID	United States Agency for International Development
VES	Vocational Education Specialist

Background

Food and Enterprise Development (FED) Program for Liberia is a USAID-funded initiative that began in September 2011. Activities are undertaken to target restoring the financial self-sufficiency of farmers (particularly youth and women) through agriculture activities that will increase agricultural productivity and profitability, improve human nutrition, and stimulate private-enterprise growth and investment. Moreover, build local technical and managerial human resources to sustain and expand the accomplishments achieved under objectives one and two.

Its major project areas include: Peri Urban Agriculture, Agricultural Productivity and Profitability and Capacity Building, Business Skills and Management and Small Medium Enterprise Trainings while providing support, creating market linkages and access to loans for local farmers on the agricultural level and building local technical and managerial human resources to sustain and expand the accomplishments achieved under objectives one and two.

FED is implemented by three partners: Development Alternatives, Inc. (DAI), Winrock International, International Fertilizer Developmental Center (IFDC), and Samaritan's Purse and Louisiana University who work primarily as a team.

Quarterly Summary

Activities began during this quarter from April to June 2012 in Bong, Nimba Margibi, Grand Bassa, and Lofa counties. Activities in the counties mentioned above for this quarter began with the identification of farmers' cooperatives and associations in Lofa, Bong, and Nimba. Additionally, a series of two-day business skills training was conducted, including for the Farmer Associations in Gbarnga Bong County, and a Business Management Skills Training for SMEs in the Cassava Value Chain with the National Cassava Sector at the Royal Hotel was also held in Sinkor Monrovia. While a testing of soil water to determine available nutrients in the soil and similar training was provided to two of the rainy season vegetable groups (Mount Barclay and Cocoa factory communities).

The long-term ED Specialist, Mark Nolan, joined the Monrovia FED Team on March 20, 2012. He died unexpectedly of natural causes on April 5, 2012. Upon his arrival, Mark immediately began working with a variety of farmers groups, local cassava producers, and many others. He made many valuable contributions in a short period of time and the whole FED team continues to mourn this tragic loss.

Twenty-four lowland rice producer groups and eight upland rice producer groups have been identified – six of the formers and two of the latter in each of the priority counties. The membership of these groups totals approximately 750 producers. Each of the lowland groups possesses a lowland site that is in need of rehabilitation and has expressed interest in rehabilitating the site and expanding production over time. The expression of what FED and each group has agreed to serve as the foundation of an MOU signed by both parties.

A short-term Technical Assistant, Matthew Curtis, conducted a soil study and analysis in FED's counties operation and he developed management plans that would maintain soil organic matter content. These include the use of alley cropping, cover crops, and biochar. Swamp rice sites were evaluated for clay type and depth. An assessment was done by STTA, Dr. Steven Lawry, DAI manager for Land Tenure and Property Rights, on how Liberia's land tenure arrangements might affect adoption by FED partner farmers of new agricultural practices and technologies. Of particular interest was whether farmers had sufficient security of tenure to merit investments that generate benefits over the longer-term.

The Doumpa Agriculture Project is a community project that started in February 2012 with intervention from the Food and Enterprise Development (FED) Program for Liberia with funding from USAID-Liberia. Doumpa is a town in Wee-Gbehyi-Mahn District, Nimba County, Liberia. Currently, the project has 342 local farmers working on the farm as volunteers willing to learn the new skills and knowledge that have been applied by the FED hire technical team and later return to their farms and transfer the knowledge gained to increase their production and profitability. Transplanting of the lowland rice (2.232 hectares) began on June 8, 2012, and increased to 25 hectares by June 30. A total of 49 plots have been transplanted with L19 out of 56 plots. Puddling and transplanting of remaining plots continue. Special mobilization has been launched to speed up the transplanting, with the goal of transplanting the entire field by July 20, 2012. The entire one hectare field is now planted with seven crops, including cabbage, hot pepper, eggplant, tomato, batter ball, cucumber, and macro cabon, through both direct and indirect planting. The crops are mainly a three-month duration, with harvest expected in September. Maintenance of the entire field is ongoing.

The FED's IT department successfully set up three field offices in Grand Bassa, Nimba, and Lofa counties, respectively. This included set up of the network printer, cable and wireless router, desktop computers, and other support as required.

Quarterly Highlights

FED and MoA extension staff were trained in improved rice production techniques and technologies based on a course comprising as many as eight modules (e.g., planning, budgeting, seedling production, land preparation, etc.). Participatory training of farmer's associations will be carried out concurrently. In addition to training in improved practices, farmers were introduced to technologies that will reduce production and processing labor bottlenecks and will increase yields. Some of these technologies include rotary rice weeders, power tillers/levelers, impact rice de-hullers, and rice dryers.

On May 2, 2012, there was a one-day consultative workshop organized in Monrovia to develop a strategy and action plan for agro-input supply as farmers and agro-input dealers seek better policies on agro-inputs to enable and encourage local farmers to increase productivity and profitability. The workshop brought together 33 participants from agro-input dealers, seed suppliers, farmer's cooperatives and associations, the Ministries of Agriculture (MOA), Finance (MOF), and Banking and Micro-Finance Institutions (MFIs), to work together to develop guidelines for an agro-input supply action plan for Liberia.

A total of 14 peri-urban farmer groups were identified in Montserrado and Margibi counties for the rainy season vegetable production. These groups have prepared a total of 7.54 hectares of land for the demonstration of vegetable production and work continues with the demonstration plots on the 14 groups which are going ahead now that the main rains have commenced. Pest pressures, in particular foliar diseases, are significant but it is believed that, in some cases, the agrochemicals requested under the PERSUAP application should address the crop protection problems as identified to date. Pest and diseases present in Liberia continue to be identified by project staff and have necessitated some modifications to cropping plans. For instance it is evident that some sweet corn (green maize) cultivars are very susceptible to blight so the procurement of known resistant cultivars is important. Since part of the training is the building in of flexibility to agricultural planning this has been a very useful exercise.

Value Chain Finance STTA, Mary Miller and Jetty Smith-Carter, together conducted an Access to Finance study. The purpose of this study was to assess the current availability of finance, particularly from financial institutions, to serve FED project clients, as well as to assess the bankability of clients, and their potential to access credit. Based on these investigations, the goal is to develop an action plan of steps that FED can undertake to increase the availability of finance.

Additionally, there was a three-week assessment on how Liberia's land tenure arrangements might affect adoption by FED partner farmers of new agricultural practices and technologies. Of particular interest in the assessment, was whether or not farmers had sufficient security of tenure to merit investments that generate benefits over the longer-term.

During this quarter, the following business management and skills trainings were conducted:

- SMEs in the Cassava Value Chain with the National Cassava Sector at the Royal Hotel in Sinkor, Monrovia with a total number of 24 participants (10 female and 14 male);
- Business Management Skills training workshop for SMEs and Producer groups was held in Monrovia with a total of 26 participants trained (9 females and 17 males);
- Business Skills Training Seminar for Liberian Farmer Associations was conducted in Grand Bassa and Nimba counties with a total of 62 participants (32 males and 30 females).

Three FED Extension Agents were trained on crop planning, input procurement and testing of soil water to determine available nutrients in the soil and similar training was provided to two of the rainy season vegetable groups (Mount Barclay and Cocoa factory communities) benefitting 40 farmers (31 females and 9 males).

In the month of May 2012, periodic trainings were conducted by the Peri -Urban Agriculture team. Farmers were trained in establishing nursery and sowing of seeds in nursery. The total number of 270 (146 males and 124 females) were trained.

From June 14 to 20, 2012, the VES and youth VES held a three day teacher's training workshop for the teachers and a stakeholder's workshop of BWI and the Nimba County Community College. There were 52 teachers (41 males and 11 females) that attended the teacher's workshop and 32 (17 males and 2 females) that attended the stakeholders meetings.

Three FED extension agents were trained on crop planning, input procurement, and testing of soil water to determine available nutrients in the soil, and similar training was provided to two of the rainy season vegetable groups from Mount Barclay and Cocoa Factory communities which benefited 40 farmers (31 females and 9 males).

A total of 342 farmers (165 males and 177 females) from the Doumpa Community Agriculture Project also received basic training in lowland rice and upland vegetable farming. Transplanting of vegetables from nursery was completed and the transplanting of lowland rice is currently at 80% completion.

From June 13- 22, 2012, rice production and processing demonstration training was done in Bong, Lofa, Nimba, and Grand Bassa counties with 772 participants. Participants by county included Bong (213), Lofa (213), Nimba (240), and Grand Bassa (106).

COMPONENT ONE: INCREASED AGRICULTURAL PRODUCTIVITY

Project Planning

An increase in agriculture productivity chart for Year One was developed in the reporting period. The increase in the agriculture productivity chart outlines all activities that will be undertaken to contribute to the Year One annual work plan.

Task 1.3 Input Supply System Interventions

During this quarter, April to June 2012, farmers' cooperatives and associations were identified in Lofa, Bong, Grand Bassa, and Nimba counties. Sites for FED activities including demonstrations on integrated soil fertility management (ISFM) and urea deep placement (UDP) were selected in Bong, Nimba, Lofa, and Gran Bassa. The table below summarizes where FED will be working and in which value chains:

County	District	Value chain
Lofa	Foya, Voinjama, and Kolahun	Rice
	Salaye and Zorzor	Cassava
Bong	Salala and Panta	Rice
	Suakoko and Kpai	Rice
	Kokoyah and Jorquelleh	Rice & Cassava
Nimba	Garr-Bain, Zoe Geh, Sanniquelle Mah	Rice
		Cassava
Grand Bassa	District #2 and # 3	Cassava

During sites visits and selection the below information was gathered:

- i. The collection of geographical information to map out the locations and irrigation schemes visited.
- ii. A rapid assessment of the irrigation layout.
- iii. A rapid assessment of crop management in the lowlands and the vegetable production schemes by women's groups.
- iv. Group discussions to better understand the issues the groups and associations are faced with regarding lowland rice production, what kind of support from international organizations is currently being provided, management of the irrigation structure, and access to farm inputs.

The findings suggest that:

- i. Irrigation structures are poorly managed. Poor maintenance of the dam, headers and canals, leads to poor water control, water logging, iron toxicity and nitrogen deficiency altogether.

- ii. Crop yields are still very low (1.14-6.3 Mt/ha) as a result of poor water, weed, crop disease, and soil fertility management in the lowlands.
- iii. Extension support is still weak and international NGOs have had difficulties in capacity building activities. This has led to continuous dependency on free seed, fertilizer, tools, and farm machinery for land preparation and rice processing, and limited capacity among farmers associations for organizing themselves and getting access to farm inputs, developing local savings schemes, and accessing micro-credit.
- iv. The women's' groups involved in pepper production have limited support from their communities and from development partners. The community has allocated land to the women, but it's far from the village and difficult to access. The pepper seeds they are using are bought from the local market and are not certified. They have no equipment for chemical treatment of the crops in case of pest or disease outbreak.
- v. The cooperative visited at Bardeku/Voinjama is not functioning because of a lack of leadership and management capacity. Internal problems of leadership and weak performance need to be resolved.

The following actions will be taken by the FED project from April-September 2012:

- i. Training of up to 600 farmers on ISFM and UDP, and demonstrations to address iron toxicity and nitrogen deficiencies in the lowlands, and to reduce upland exposure to erosion with appropriate farming practices.
- ii. Organization of a pilot demand-driven agro-inputs voucher workshop to create awareness of agro-inputs markets opportunities.
- iii. Coordination and supervision of capacity building activities for extension personnel and development partners in the target counties and districts.

During the month of May 2012 identified partners, seed suppliers/farmers' cooperatives and associations were visited in Bong and Lofa counties.

The objectives of the visits were:

- i. To meet with CARI in Bong and agree on action points for training seed producers and upgrading farmer's training in lowland and upland rice production techniques.
- ii. To visit the Mohamed Kamara seed production farm in Lofa/Quardi-Gbondi District/Jarmulor Town and determine potential areas of collaboration with the FED program to train other farmers in the locality.
- iii. To visit ARJAY FARM and determine potential areas of collaboration with the FED program in training out-growers in the locality.
- iv. To determine where to focalize support for upgrading input supply for lowland, upland rice and cassava production/processing activities in 2012.

Critical questions that need to be addressed include:

1. How to keep farmers' interest active in lowland production activities?
2. What benefits can farmers achieve through lowland production activities in financial terms, and what support is needed for those benefits to be achieved?
3. What are the social, technical, and economic challenges between production activities in the lowlands and in the uplands, and how are our strategies helping to address those challenges?

Improving Access to Quality Agro-Inputs

A one-day consultative workshop in Monrovia was organized to develop a strategy and action plan for agro-input supply as farmers and agro-input dealers seek better policies on agro-inputs to enable and encourage local farmers to increase productivity and profitability.

The workshop which was held at the Liberian Chamber of Commerce on May 2, 2012, brought together 33 participants from agro-input dealers, seed suppliers, farmer's cooperatives and associations, the Ministries of Agriculture (MOA), Finance (MOF), and banking and Micro-Finance Institutions (MFIs), to work together to develop guidelines for an agro-input supply action plan for Liberia.

The objective of the workshop was to develop an integrated strategy and action plan for input supply interventions for the agriculture sector in Liberia. The integrated strategy is expected to move the rice, cassava, vegetable, and goat value chains from their current low productivity state to a higher level, based on increased involvement of the private sector thereby generating higher returns for all value chain participants.

FED has been working to identify a number of constraints in the seed and agro-input supply sector. Poor irrigation systems, high prices for agro-input supplies in Liberia, lack of policy on agro-inputs supply and seeds suppliers to protect the dealers and farmers, and lack of community micro-credit and saving organizations amongst farmers are some major constraints Liberian farmers and agro-inputs dealers are faced with and as a result almost all agricultural inputs dealers are now based in Monrovia. There are also many seed suppliers who provide other inputs too. In the counties, only one agro-input supplier, ANARCO, is located in Ganta, Nimba County.



Picture 1: Cross section of participants

The Agro-input dealers were glad to be a part of the workshop recommending that the MOA and MOF develop policies on agro-inputs which will encourage and enable local farmers to improve and increase productivity and profitability.

At the end of the workshop, Deputy Minister Dr. Sizi Z. Subah, assured the participants that the MOA and MOF will do everything to help the sector grow, which will include developing better policies that will be in the interest of the farmers, agro-input dealers, and the country in general.

A meeting was held with the administration of Center Agriculture Research Institute (CARI) in which FED came to the conclusion that there is a need to create an awareness and interest among farmers in Liberia. From the breeder seed (from AfricaRice Center), CARI produces foundation seed distributed to out growers for multiplication and distribution to farmers. There were 30 Mt of seed rice in the CARI warehouse. FED noted, however, that only NGOs come to CARI for seed, and regular farmers do not come to CARI to buy high quality and certified seed.

The varieties available at CARI include: i) Swakoko-8 (high resistance to iron toxicity); ii) Nerica L-19 (high yielding with 3 Mt/ha), and FKR-19 (2.8-3 Mt/ha). Seed certification at the level of out growers is based on criteria such as: i) cleanliness, ii) debris, iii) disease, iv) moisture content (14% is the acceptable level), and v) germination rate (90-100%).

There are three out growers currently working with CARI: i) Mr. Samuel Z. Mulbah, in Bong County, who is producing seed rice on 3.6 hectares of lowland, ii) Mr. Harry S. D. Lami, in Nimba County, who is producing seed rice on 10 hectares of land, and iii) Mr. Mohammed Kamara, in Lofa County, who is producing seed rice on 30 hectares of land.

CARI is ready to train seed rice out growers and small holder farmers in lowland improvement and management, seed production, handling and storage, and improved cultural techniques for upland and lowland rice production.

Testing and Introduction of New Technologies

UDP and ISFM demonstrations will be carried out in Grand Bassa, Bong, Nimba, and Lofa counties for improved rice and cassava production. Input supply will be organized with four selected cooperatives in the four counties and cooperatives will be involved in capacity building activities for input supply, rice, and cassava processing and marketing for their members and the community members.



Picture 2 & 3: Assets of the Dokodan farmer's cooperative. A good business plan will ensure efficient use, 2012

Lowland Rice and Cassava Production/Processing Activities

An Overview of Issues: The visiting FED team visited many lowland rice farm activities in Grand Bassa, Lofa, and Nimba counties. The table below summarizes observations on rice and cassava production and processing in the sites visited in April-May 2012.

County	Location	Size of the Rehabilitated Swamp/Type of Activity	Issues of Concern
Grand Bassa	Kotar Town/Compound #2 Kotar Swamp Development Project	<ul style="list-style-type: none"> • 3.5 acres with 11 plots of 20 x 20 dimensions. • The swamp is abandoned. • A warehouse build by UNDP for seed storage was not handed over to the community since its completion in 2010. • Concern WorldWide members who had experience in swamp rehabilitation did not come back to the swamp. 	<ul style="list-style-type: none"> • Project started in 2007 with assistance from FAO for the layout, seed, and tools with 25 members. • Rice was planted for the last time in 2009, as there was no one to buy rice as FAO ceased buying. People did not want to produce just for eating.
	Tepeneh Town/Compound # 2 Tepeneh Cassava Processing Unit/Nahyee-Sor women association	<ul style="list-style-type: none"> • Created in 2001, with 35 women as members. • The cassava processing unit is not functioning. 	<ul style="list-style-type: none"> • Members were involved in cassava production and processing and there is no savings scheme in the association. • There is no cassava to process as cassava farms are destroyed by the goats. There was a meeting in the community to get rid of the goats. • Cassava processing into Gari stopped in December 2011. Production was 7-8/50 kg bags of gari/month corresponding to 21-24/50 kg bags of fresh cassava (1.05-1.20 Mt/month). • Operating costs: • 3/50 kg bags of fresh cassava=1 bag of gari + 30

			<p>cups</p> <ul style="list-style-type: none"> Members were charged 25 cups of gari for fuel, and non-members were charged 50 cups or 125 L\$ in cash.
	Kpelleh Town, Compound #2, Kwep-pa-geh association of women	<ul style="list-style-type: none"> 3.5 acres are cleared and cultivated. The layout of the swamp was done in 2000 with support from FAO. 17 women and one man are members of the association. 	<ul style="list-style-type: none"> The women can use the swamp for an unlimited time. The land is given by the community to the association. A written document will be requested in the event assistance from the project is provided. The women are growing rice for selling and for household consumption. The labor is provided by the members themselves and their husbands. 50 kg of rice seed were purchased at the cost of 3000 L\$. The association is not getting support from anyone. Due to the lack of extension supervision, rice is not adequately cultivated in the swamp. The drainage system is not rehabilitated. The women are intending to bring in someone to rehabilitate the swamp.
Nimba County	Dokodan farmer's cooperative, Gbedin Camp #3, Ganta, Nimba County	<ul style="list-style-type: none"> There are two sites, 80 hectares of land each. There are 250 members (96 women and 154 men). The cooperative has many assets and equipment: land, two rice mills; a warehouse, a new 30 Mt capacity truck, farm machinery, etc. 	<ul style="list-style-type: none"> Still expects aid from FAO and/or WFP. The dam headers and the canals are poorly maintained. Capacity for warehouse management is very limited. Capacity for overall maintenance of the swamp is poor and production is reduced to one crop every year, instead of 2-3 under normal irrigation conditions.

	<p>Kpaglay farmer's group/Kpaglay Town/Bahn District/Daylah farmer's group</p>	<ul style="list-style-type: none"> • The size of the swamp is 2.6 hectares. • There are 25 members (8 women and 17 men). • The group runs a savings scheme from the money after rice sale. • Those needing credit are given money with a 25% interest rate for group members and 30% interest rate for non-group members. 	<ul style="list-style-type: none"> • The harvest in February 2012 was 18/50 kg bags due to pests, disease, birds, lack of fertilizer, high damage by stem borers, lack of a measure to reduce iron toxicity and damage by ground hogs (0.35 Mt/ha). • The group uses Zor, a local variety that withstands iron toxicity, but has a long cycle (5 months). • The group pays rent to the swamp owner (3/50 kg bags). • They sold 10/15 bags after paying three bags to the swamp owner. • Lack of an NGO to buy rice to give to other farmers as seed. • Lack of extension support. • Fertilizer not used last season, but knowledge of NPK and the urea are used for lowland rice. • They do not know what should be used against pests.
	<p>Zayglay Gbondeah Farmer's association/Bahn District/Nimba County</p>	<ul style="list-style-type: none"> • Created in 2010. • There are 25 members (10 women and 15 men). • The size of the cassava farm is three acres. • The landowner is the group chairperson. • 50% of the harvest is sold and 50% consumed by the members. • Each member has his own farm (about three acres). 	<ul style="list-style-type: none"> • Transport is by head load to the local market in Bahn (30 meters from the village). • Cassava cuttings come from members farms. • Paid labor is used once in a while (150 L\$/person/day). • The group runs a savings scheme with registration of 20 L\$/member, contribution of 50 L\$/month, and interest rate for loans of 20%.

Task 1.5 Increased Production and Profitability of Quality Rice

The quarter was largely devoted to preparing for farmer training in improved lowland and upland rice production. This has been divided into five tasks:

- Local rice officer, expatriate rice specialist, and extension agent recruitment.
- Identification of and the signing of MOUs with lowland and upland rice producer groups.
- Development and start-up of the improved rice production training program.
- Preliminary identification of appropriate production and processing equipment.
- Procurement of inputs, tools, and equipment required for the farmer training.
- Start-up of the improved rice production training program.
- Continuing identification of appropriate production and processing equipment.

In Bong, Nimba, Grand Bassa, and Lofa counties, contact has been made with MoA extension agents and district agricultural officers. FED and GoL staff met with farmer groups to explain the objectives of FED and to learn more about the farmer's priority interventions and activities.

Staff Recruitment

An expatriate rice specialist was identified in May and agreed to the proposed terms of employment. His candidacy has since been communicated to USAID. The local rice officer and eight agriculture extension officers were also hired.

MOU Signings by the Rice Producer Groups

Twenty-six rice producer groups – signed MOUs in preparation for the rice production training that started during the month of June. This includes 22 lowland groups and four upland groups.

Start-Up of Improved Rice Production Training

Training of FED and MoA extension agents and farmers in improved rice production practices started in early June. The training program consists of the following: field preparation, proper layout for water management, seed and other input selection, compost production, planting and transplanting, water management, fertilizer and other input application, pest and disease management, weeding, harvesting, and post-harvest storage and processing. By June 30, most of the fields had been laid out and were being tilled and seed for seedling production had been planted. Twenty-six groups (approximately 650 farmers) are being trained.

Preliminary Identification of Rice Production and Processing Equipment

A short list of power tillers and rice hullers to address current labor constraints have continued to be compiled and suppliers contacted for pro forma invoices. Two manufacturers in the Philippines of the IRRI hydro tiller have been contacted and provided pro forma invoices.

Given its low cost, light weight, fuel efficiency, and ease with which it could be manufactured in Liberia, the impact rice huller would seem to be an ideal fit for the Liberian market. However, because it does not polish the grains, it will be important to determine through market testing whether this technology is capable of delivering a product acceptable to the Liberian consumer. Its testing is planned for September 2012.

Task 1.6 Increased Production and Profitability of Quality Cassava

Furthermore, specific short-term consultancies were planned and SOWs developed for the provision of technical assistance to cassava post-harvest activities. Eric Nzokou, a short-term technical assistant, will train staff and at least one local metal worker, in the manufacturing, use, and maintenance of a fiber-discharge cassava mill developed in Cameroon and used widely there for the grinding of cassava and corn. The production of a portable version will also be explored. Pending approval by USAID, this STTA is expected to be implemented starting in August.

The IITA mobile grater was identified recently. Its low cost and capacity to cover a number of population centers could make it a profitable investment for small entrepreneurs. This potential will be assessed by Duke Burrell during his visit in July.

Finally, FED ED staff will assess the viability of mobile cassava graters in use in Grand Cape Mount County that have reportedly been imported from Sierra Leone. Depending on the findings of this study, this technology may have widespread potential in the FED project area.

The Doumpa Agriculture Project is a community project that started in February 2012 with intervention from the FED Program for Liberia with funding from USAID-Liberia. Doumpa is a town in Wee-Gbehyi-Mahn District, Nimba County, Liberia. Currently, the project has 342 local farmers working on the farm as volunteers willing to learn the new skills and knowledge which has been applied by the FED technical team and which will later return to their farms and transfer the knowledge gained to increase their production and profitability.

Transplanting of the lowland rice (2.232 hectares) began on June 8, 2012, and increased to 25 by June 30, with a total of 49 plots transplanted with L19 out of 56 plots. Puddling and transplanting of remaining plots continue. Special mobilization has been launched to speed up the transplanting and by July 20, 2012, FED expects the entire field will be transplanted. All of 1 hectare field is now planted with seven crops through both direct and indirect planting. The crops planted in rank of space include cabbage, hot pepper, eggplant, tomato, batter ball, cucumber, and macro cabon. The crops are mainly three month's duration, with harvest of these crops expected in September. Maintenance of the entire field is ongoing.



Picture 4: Transplanting of lowland rice Doumpa, Nimba County.

Cassava Training

Cassava plays a huge role for average Liberian farmers, especially women who carry the burden of providing alternative food supplement for household food consumption. The availability of improved varieties (bassa girl, butter, and carricass 1, 2, and 3) is some of the main challenges in cassava production activities. Additionally, farmers across Liberia have had little or no training in cassava production.

Twenty cassava farmer groups have been selected in Bong, Nimba, Lofa, and Grand Bassa counties for demonstration of improved planting and improved cassava variety. Twenty-two lead farmers from the farmers associations will attend training on improved cassava production in Bong Mine, Bong County and later return to their associations and transfer the knowledge to other farmers in close collaboration with the FED extension staff. The training will include cuttings preparation and handling, nursery preparation for multiplication and mini-setting, nursery management, layout for field planting, soil preparation, soil preparation, and field planting.

The key objectives of the FED cassava intervention are as follows:

- Increase farmer's capacity to increase the production of cassava in the FED target counties of Bong, Grand Bassa, Nimba, and Lofa.
- Expand the network of out grower farmers to produce cuttings in the FED main counties mentioned above.
- Provide sustainable and profitable cassava farming operations for cassava farmers in the target counties.

Task 1. 7 Peri-urban Vegetable Production

Capacity building

During this quarter, the Peri-urban Vegetable Production team began by identifying 13 groups in Montserrado and Margibi counties for rainy season vegetable production. These groups have prepared a total of 7.54 hectares of land for the demonstration of vegetable production.

Table 1: Rainy Season Vegetable Groups

No.	Community Name	County	Land area prepared(hectare)
1	We are one, Clean Town	Montserrado	0.73
2	Better day, Gbatfpamah Town	Montserrado	0.61
3	Kailifidiah, Fahn Town	Montserrado	0.85
4	Togetherness, Keyamee Town	Montserrado	0.81
5	Air Town Farmers Association, Air Town	Margibi	0.73
6	Yarnwuellie, Agricultural Training Program	Margibi	0.40
7	True Satisfaction (group one), Nyatkata	Margibi	0.40
8	True satisfaction	Margibi	0.40
9	True satisfaction	Margibi	0.40
10	Cocoa Cola	Montserrado	0.40
11	Mount Barclay, YEAR	Margibi	0.80
12	Wohn, Gibi	Margibi	0.61
13	Gbarlin Women Resource Center	Margibi	0.4
		Total	7.54

Weekly training at the 13 demonstration sites continues when field layout been completed. Basal application of NPK (15:15:15) was applied and transplanting of seedlings to the field is ongoing.

Training of extension staff on the remaining modules was completed in May. Seeds for cover crops and virus resistant/tolerant chili's are being sourced. A vigorous pest and disease survey of peri-urban crops is underway with the planned first edition of a handbook for all field staff in the MoA and other organizations working in this area within Liberia which was ready by mid-May. The handbook will be updated on a regular basis as a FED-led initiative of the Liberian Urban and Peri-Urban Agriculture Working Group.

Discussions have begun with input suppliers based on inputs tailored to:

1. Liberian soils and crop requirements for fertilizers based on soil testing continues. In particular the assistance provided by a consultant soil scientist has enabled FED to focus on the three classes of nutrient availability, i.e., nutrients not limiting and already present, limiting nutrients which farmers can obtain for themselves in the environment or cropping system and nutrients that need to be supplied from outside sources. This has allowed some focus to discussions with fertilizer input providers.
2. The identified pests and diseases present on the crops targeted by the peri-urban component continue to be added to. Nevertheless, a first edition pest and disease identification handbook for internal use by FED staff was produced. The presence in Liberia of diamond back moth (DBM), a potentially severe pest of brassicas, has now been confirmed. In many cropping systems in Liberia it seems to be well controlled by natural enemies and appears to be present where broad spectrum pesticides are in regular use (NB, identification was in a non-FED project field of collards and in the main produce market in Monrovia).
3. Seed and plant material availability is a significant constraint. Problems identified such as inappropriate cultivars, poor storage, shortage of seed and vegetative planting material are now in the first stages of being addressed through a series of discussions with current and potential suppliers and producers.

Preliminary planning continues for the development of basic training materials in crop planning and budgeting. More advanced training modules are being planned for selected farmers and input providers in July and August 2012.

Training of extension staff on the remaining modules will be complete within the next three weeks. Seed of cover crops and virus resistant/tolerant chili's are being sourced. A vigorous pest and disease survey of peri-urban crops was conducted and included in the first edition of a handbook finalized on May 16, 2012, for all field staff in the MoA and other organizations working in this area within Liberia. The handbook will be updated on a regular basis as a FED-led initiative of the Liberian Urban and Peri-Urban Agriculture Working Group.

Carl Motsenbocker, a short-term horticultural specialist from LSU, worked in collaboration with the Peri-Urban Agriculture team for 17 days to identify two vegetables with high dry season production potential. He visited vegetable production sites and carried out a survey to determine vegetable preference amongst farmers, average surface areas under vegetable cultivation, and quantities harvested. A presentation on his finding was held on June 29, 2012, at the FED office.

Transplanting and direct planting of vegetables is ongoing at the FED demonstration plot in Kakata. Vegetables being transplanted include eggplant, cayenne pepper, sweet potatoes, okra, and watermelons. Others include cassava, moringa, and cassia siebenna. Dry season crops harvested include 6 kgs of white onions, 5 kgs of red onions, and 43 kgs of pepper. Vegetables harvested were distributed to Rennie hospital, BWI, and My Brother's Keeper Orphanage.

Finally, Standard Garage, the Ganta metal workshop trained by the FED project to manufacture the treadle irrigation pump, conducted 10 treadle pump demonstrations in Nimba County in April. Conducted in preparation for the start of the next dry season when most irrigation equipment is purchased, these demonstrations were attended by more than 150 farmers.

Increased Production and Profitability of Vegetables

In addition to the peri-urban agriculture activities reported, vegetable-related activities undertaken in June included the following:

- Training of two local artisan workshops in tube well installation.
- Planning for STTA to introduce the low-cost forced-air dryer technology.
- Preparation for the expanded commercialization of vegetable seedlings.
- Preliminary planning for the 2012-2013 dry season.

Forced Air Dryer Introduction

At the end of June, planning began in earnest to introduce the forced air dryer. One version uses propane and the other biomass as a fuel for heating. The propane-fueled model is likely to find a high level of acceptance in urban centers, while the biomass-fueled model should realize good acceptance in rural areas. Start-up of this effort is tentatively scheduled for on/about August 10, 2012, when Eric Nzokou will arrive in Liberia.

Expanded Commercialization of Vegetable Seedlings

In June, the FED M&E team developed a questionnaire to be administered to active vegetable seedling producers. The results of this survey of thirty seedling producers will help to select seedling production trainees and to structure the program for upgrading their skills. This program is scheduled to start in mid-August, when approximately 20 seedling producers will be trained in the six project counties and supported in their efforts to expand vegetable seedling production and commercialization. During the 2012-2013 dry seasons, it is anticipated that these nurseries will produce and sell between 20,000 and 40,000 seedlings, benefiting 200 to 400 vegetable growers.

Preliminary Planning for the 2012-2013 Dry Seasons

Meetings were organized to begin planning for the 2012-2013 dry season. Points addressed included:

- Expansion of the Peri-Urban Agriculture program to include Bong, Lofa, Nimba, and Grand Bassa counties.
- Addition of new groups and further strengthening of previous groups in Montserrado and Margibi counties.
- Expansion of the PUA program to include erosion control, soil amendments, IPM, and selective use of pesticides according to the PERSUAP.
- Raising awareness amongst trainees regarding improved irrigation and processing technologies.
- Increased involvement of local organizations (e.g., Human Development Foundation) in the development of the vegetable value chain.

Outcome(s):

- Farmers trained in field layout (323), fertilizer application, and transplanting of seedlings to the field.
- Kakata demonstration plot laid out for vegetable demonstration.
- Two vegetable crops recommended for the peri-urban dry season vegetable production.

- One workshop (5 workers) trained in the construction and marketing of treadle irrigation pumps.

Outstanding activities:

- Completion of transplanting of vegetable seedling at the 13 demonstration sites.
- Vertiver expansion.
- IPM (Integrated Pest Management) training.

Tube Well Installation Training

Omar Abdou, a tube well specialist from Niger, trained FED Manufacturer Trainer Dennis Wilson and began the training of thirteen workers in two workshops – Standard Garage in Ganta and SMART Garage in Gbarnga. Following Abdou’s departure on June 29, Wilson will complete the training and in the process install two more wells with each of the workshops. With the workshops taking the lead, a promotional campaign will be conducted at the start of the dry season in September/October and at other critical moments during the gardening season (e.g., December/February).



Picture 5: Demonstration of Tube Well Drilling

The pests and diseases identified in Liberia are complex. The first identification of broad mite in Liberia has been made. This pest is estimated to reduce the potential yield of chili crops in the country by more than 50%, but no management systems are in place – simply because the problem has been misidentified until this point in time.

Fertilizers were provided to the 14 groups (14 bags of NPK and 10 bags of Urea, 50 kgs each). A market survey was carried out to determine market price for vegetables grown and to initiate the linkages between farmers and market.



Picture 6: Monitoring of insects on peri-urban vegetables



Picture 7: Training at Mount Barclay

The demonstration site at the MoA in Kakata commenced rainy season vegetable production. The crops included okra, maize, and cassava.

Soil Study and Analysis

Matthew Curtis, STTA, soil specialist, worked with the Peri-Urban Agriculture Team and the county technical teams to identify soil fertility and management problems. In particular, the soil specialist developed management plans that would maintain soil organic matter content. These include the use of alley cropping, cover crops, and biochar. Swamp rice sites were evaluated for clay type and depth.

The soil specialist visited the UL and BWI and evaluated the soil laboratory at the UL and the soil fertility curriculum at BWI. He identified a private lab that wants to begin testing soils.

The soil specialist traveled to field sites in five counties and dug soil pits to evaluate the soil and take samples. A matrix of soil management guidelines was made to help maintain soil quality under annual cropping. A small text of soil related information was developed out of compiled research. A simple set of instructions for swamp soil criteria was given to extension agents so that they can choose sites that will have the greatest soil fertility potential. A meeting with the Vice President of Institutional Development of the UL was held. He expressed determination to see a soil lab established that would serve the research needs of students, faculty, and agriculture professionals. Kiazolu is the lab manager and recently suffered a heart attack, however, he is now back to work. Next in order is a meeting to identify what needs to be done to make the lab functional. An evaluation of the curriculum at BWI resulted in recommendations for texts and materials. They need to have more relevant soil fertility information such as the nutrient supply of composts, fresh manures, and the nutrient demands of local crops. We are in the process of signing a MOU with Boimah Engineering, Inc. (BEI) to train a soil technician in their soil lab (to be started in late June).

The demonstration sites using the recommended soil management techniques have yet to be implemented. The extension agents still need to be trained on how to collect soil samples from fields which are to be tested. An action plan at the UL soil lab needs to be formed, as well as training of the soil technician at BEI on how to use the soil test kit.



Picture 8: Swamp soil in Nimba County



Picture 9: Upland soil adjacent to the swamp in Nimba County

Task 1.8 Goat Interventions

Following the completion of the Goat Sector Value Chain Upgrading consultancy the following Goat Sector Strategy has been finalized to address perceived gaps.

The strategy is designed to provide strategic support aimed at increasing production/survival rates of both indigenous sheep and goat herds along with animals provided under restocking efforts through improved management practices. This is in conjunction with access to animal health services and inputs, veterinary pharmaceuticals, nutritional supplements, etc., increasing productivity and reducing mortality rates while strengthening the national MOA capacity for animal disease vaccination (PPR) and national disease surveillance.

Planned interventions for FED under this strategy include:

1. Pilot Private Sector Neighborhood Swapping/Pass-on Scheme of indigenous goats to be executed through selected “Lead” Farmers in FED target counties. This would include both the identification of recipient Lead Farmers as well as associated training of trainers within the Lead Farmers programs for extension services to be provided to participating farmers in the pass-on scheme.
2. Expansion of the current successes under the Samaritan’s Purse Community Pass-on Scheme started in 2005 and continued for the next few years. Under FED funding, the current program would be extended/expanded to two other districts in Lofa County, with training and the extension of the methodology to other districts and counties where possible to private sector operators who are willing and capable.
3. Promote Veterinary Pharmaceutical outlets in the rural areas in both Nimba and Lofa counties. This could be done in partnership with Wienco Inc., and/or MIAGO Inc., the input supply outlets currently targeting the cocoa sector and others. The Liberian concessionaire hired to manage the new Wienco Inc. input supply outlets targeting cocoa sector is experienced in Veterinary Pharmaceutical supplies and is the owner of the sole outlet store in Liberia handling pharmaceuticals. In addition, a second input provider, MIAGO will also be reviewed as a possible input supplier.
4. Train Veterinary Pharmacists to staff the Veterinary Pharmaceutical outlets created above to advise producers on appropriate drugs, etc. Currently, there is a pharmacist degree program at the UL which could be extended to include Animal Veterinary Pharmaceuticals.
5. Provide additional equipment and repair current equipment of the MOA National Veterinary Diagnostic Laboratory (Fendell, UL) in order to make it fully functional in national disease surveillance as well as the handling and disposal of potentially human transmittable disease materials, i.e. TB, etc.
6. Training of staff of the MOA Veterinary Diagnostic Laboratory in the use and maintenance of both current and new equipment provided above.

7. Address long-term recurrent cost issues of the MOA Veterinary Diagnostic National Laboratory by assessing the cost effectiveness of solar power in place of the current diesel generator power system.
8. Assist MOA with effective completion of the national PPR vaccination campaigns at the county level (Lofa and Nimba counties). Significant EU/AU/IBAR provided vaccines which remained unused due to the closure of the program (gasoline, cold chain items, and existing vehicle/motor bike repairs required). Joseph Anderson, MoA trans-boundary animal disease coordinator is putting together a list of needs.
9. Promote private veterinary services delivery and public-private partnerships in service delivery where possible.
10. There is a need for a National Livestock Policy outlining a distinct national strategy for support to the livestock sector in Liberia. Such a policy would provide basic guidance on MoA county and district level support services as well as the import/export of livestock, livestock products, and livestock production support requirements including veterinary related services, materials, pharmaceuticals, etc. A draft preliminary National Livestock Policy addressing the above needs will be an output of the FED program.
11. The draft National Livestock Policy will be the subject of a regional conference organized by the MoA with FED support aimed at providing feedback of both animal health and animal production participants in Liberia and the region. The purpose of the conference will be to review the draft Liberia policy and to establish a network forum for livestock producers and traders in the region for focusing on constraints/opportunities for expansion of livestock production and trade.

Activities Undertaken During the Quarter

Outcome(s) by priority:

1. Completion of the 2012 National PPR Vaccination Campaign has been designated as a top priority for implementation with the MoA and partner NGOs. Initial meeting/discussion outlining most appropriate divisions of labor among the key players, MOA, NGOs, FED, and Land O'Lakes, are in progress with a target date of beginning the campaign in the first week of July. The campaign will focus on all sheep/goats in the target counties of Nimba and Lofa. Although the total number of sheep/goats in these counties is not known, the number of sheep/goats under the current BRAC assisted program is 30,000, while the number under the current SP program is 1,200. Using the known animal numbers, the food security of an estimated 15,000 families raising sheep/goats will be affected by the PPR vaccination campaign. These PPR vaccinations could likely reduce overall sheep/goat annual mortalities rates from 50% to 10% resulting in an estimated annual herd increase of some 30,000 animal's per year in these two counties.
2. FED has completed the TOR for solicitations of interest and qualifications for the identification of "Lead Farmers" to participate in the neighborhood goat pass-on schemes. Solicitations are in process initially in Nimba and Lofa counties where most goats are found in Liberia. Initial identification of the first Private Farmer Candidate (Lead Farmer) in Nimba County is in the final stages of negotiation for MDF funding. Approximately 600 goats per year are planned to be distributed from the expansion of

this Lead Farmer's herd. Two goats will be distributed per family in the surrounding community resulting in a total of 300 families restocking their indigenous goats after loss from war. With envisioned training and improved management practices to be extended under the program, these 300 families will potentially produce some 1,200 goats for the local market per year.

3. FED has completed TOR with SP outlining the role of SP and FED in the joint efforts of extension of the current SP Goat Pass-on Scheme and providing support to the private sector (Lead Farmer) goat pass-on schemes. Expansion of the SP Goat Pass-on Scheme will result in 100 families per year (400 over four years) receiving two nanny goats per family each year, resulting in 200 goats per year distributed to families who have lost their animals in the war. With improved management practices, including animal health training and interventions, this will result in a potential production of approximately 800 goats a year for the local market.
4. Initial contacts and discussions have begun with an experienced Liberian private veterinary pharmaceutical dealer regarding expansion of availability of vet pharmaceuticals in rural production areas. A standard list of pharmaceuticals is being compiled for the drafting of request to USAID for the purchase of veterinary pharmaceuticals.

COMPONENT TWO: STIMULATE PRIVATE ENTERPRISE

This third quarterly report reviews accomplishments under ED trainings as they relate to our Intermediate Results (IR) and Project Intermediate Results (PIR). The ED team conducted trainings on business skills training and business management training for SMEs and local farmers associations.

Currently, SMEs do not create business plans. They are usually written formally when managers need to raise capital or apply for business licenses. In addition, companies are often too optimistic when writing the market analysis and marketing plan sections. This hampers their ability to plan and prepare for contingencies. SMEs present a financial section that has been prepared subjectively with assumptions that are often not consistent with reality.

Additionally, farmers are skilled in producing various crops, but lack the necessary business skills to transform their produce into profitable commercial enterprises. They do not have a business or marketing plan and have little or no idea on how to control costs or the source of financing. They rely heavily on subsidies from the government and donor agencies, and are also hampered by their low literacy levels.

Unlike the SMEs in Monrovia who have much stronger knowledge and skills because of their educational backgrounds, the farmers have little or no entrepreneur skills. As they recognize their shortcomings, they need help in overcoming their areas of weakness.

During the quarter, the following trainings were conducted for local farmers associations:

Business Skills Trainings

A two-day business skills training for Farmer Associations was conducted in Gbarnga, Bong County from April 2-3, 2012. This workshop was designed for individual farmers, farmer groups and associations, and women's groups who are already working in agriculture production and looking at managing profitable agriculture enterprises. At this training there were eight groups represented from five districts within Bong County and one group from Lofa County, Voinjama District.

A business skills training for local farmer associations was also held in Grand Bassa County for 32 farmers from eight groups from two districts. These farmers are mainly involved in cassava and vegetables productions. The training was held from May 28 - June 1, 2012, and a similar training was held June 4 - 8, 2012, in Nimba County with the participation of 31 farmers from 16 groups, from six districts.



Picture 10: Business Skills and Management Training, Ganta, Nimba

Business Management Trainings

From April 4 - 5, 2012, a two day Business Management Skills Training for SMEs working in the Cassava Value Chain was held jointly with the National Cassava Sector at the Royal Hotel in Sinkor,

Monrovia. The workshop was conducted by Agatha Johnson, an M/SME training specialist, and the late Mark Nolan, FED ED specialist.

This workshop covered the following:

- Overview of a business plan.
- Analyzing the market and developing a marketing plan.
- Developing the operations plan.
- Developing the financial plan.
- Writing the business plan.

As part of this technical support, the ED team in collaboration with Agatha Johnson, STTA/trainer, organized the second phase of the Business Management Skills training workshop for SMEs and producer groups in Monrovia from May 24-26, 2012 at the Liberian Chamber of Commerce. During the second phase training, 24 SMEs/producer groups were trained and the training continued in Buchanan City, Grand Bassa County, and Ganta City, Nimba County, beginning May 28, 2012 in Grand Bassa County with farmers and producer groups at a lower level.

Discussions were held on separate dates with Ame Atsu David, from the National Cassava Sector and Tupin K. Morgan, managing director of Linking Farmers to Markets. Those discussions were geared towards gathering information on the cassava value chain within the different markets around Monrovia.

Cassava value chain consultant, Duke Burruss, and Kristin Oplanick worked with the ED section to conduct cassava field assessments. They held meetings and had discussions with the president of Liberia Marketing Association (LMA) and superintendents at the different market sites. The objectives of these field visits were to gather information on:

- Growers
- Processors

Profile Commercial Buyers

As part of the above mentioned activity, the Component 2 team visited four counties (Lofa, Nimba, Bassa, and Bong) to identify and assess producer groups along the four value chains. During the visits, 24 producer groups identified and assessed the four value chains in Lofa, Nimba, Bassa, and Bong counties.

ED Specialist Activities: Melanie Bittle, STTA achieved the following results:

1. **Enterprise Development Plan Pilot Training:** EDS worked with the ED Monrovia team members and MDF team to develop, plan, and budget for a pilot training utilizing the ED plan model created by Sue Savage. The concept was introduced to the COP and county managers. The first phase of the pilot training will be held in Nimba County from July 5-6 with 12 farming associations groups who participated in basic business training provided by the STTA training specialist from June 4-8.
2. **Development of Enterprise Development Training and Intervention Strategy:** Taking into account the input and feedback from the ED team, COP, county managers, and MDF team, the EDS developed a strategy to roll out ED initiatives which include:

- Database of stakeholders: The EDS and ED team are working with the M&E team to develop a questionnaire to be used to profile commercial buyers, agro-input dealers, processors, and transportation and logistics companies. The M&E team will hire enumerators to gather initial profile data. Profile data on lead producers (FBOs) will be gathered by C1 and C2 members as they begin working with FBOs. The information will be stored in a database in TAMIS and will be used to generate rural enterprise maps and will be the basis of an Agricultural Business Resource Database. The information will be used to link stakeholders along the value chain, help identify partners for MDF projects, and track FED interventions with these groups and that information will be updated on an ongoing basis by extension officers, ED assistants, and the ED team in Monrovia.
 - IQC for Business Training Providers: IQCs will be issued to identify and select a group of local providers for a variety of business training topics. Four IQCs will be issued, including rural modules (very basic business concepts, basic financial management and record keeping, EDP, conflict management, organizational development, including illiterate modules), SME Modules (more advanced concepts on financial management and record keeping, business plan writing, and computer training), village savings and loan association modules, and literacy and basic math skills modules.
 - ED Assistants in the Counties: One ED assistant will be hired per county to assist in all ED program and implementation activities in the field. The SOW for the position is under development by the EDS and will be shared for feedback from the county managers and COP.
 - Training Intervention Strategy: An initial assessment of a target group or entity (FBO or SME) will be conducted by the ED assistant and/or the ED Monrovia team to determine training and intervention needs. A tailored intervention plan will be developed with those groups who meet determined criteria. The intent is that FED will train, mentor, and follow up with a group as they develop, with both parties contributing as a requisite to continue the partnership. Those FBOs already receiving agricultural training will take priority over new groups that are not currently involved with FED (per county manager request).
 - SME Development Intervention: The ED assistants along with the ED team in Monrovia will use top down and bottom up approaches to identify potential SMEs providing goods and services along the value chain that would benefit from the MDF. Examples of this type of MDF include purchasing equipment to start a new enterprise or expand an existing one that would benefit the agricultural sector. The concept of how these SMEs will be identified is still under development, however, it will most likely include leads from Component 1 member forums to be held in the counties to introduce FED and accept applications of concepts for businesses, and hiring local NGOs in the counties to identify SMEs that would be good candidates for the MDF project based on a specified criteria. The stakeholder database will also be a good resource.
3. **Met and Assessed Prospective SME and MDF Partners:** The EDS and ED team met with the prospective SME MDF partners listed below. As a follow up, the EDS developed an initial intake form to be used to assess business ideas and generate basic profitability, break-even analysis and

cash flows in lieu of a full business plan to get the MDF started. All participants will be asked to attend a formal business plan training to fully develop these plans.

- Green Farm – providing pharmaceuticals for goats in the counties.
- Boima Engineering – private soil testing lab.

Others to be approached in July:

- Tarlo Mixed Farms – private goat breeding farm.
- Ramsey Bright – cassava processing equipment.

4. Field Visit – Bong and Nimba Counties: The EDS participated in a three-day trip to Nimba and Bong counties to:

- Visit two functioning cooperatives to assess SME training needs.
- Visit four rice demonstration plots, and briefly visit with groups to assess training needs.
- Visit two SMEs who are working with Component 1 members to develop new T-wells to assess training needs.
- Visit with Nimba and Bong County managers to talk about ED strategy going forward.
- Meet ACIDI-VOCA DCOP and team members and exchange information in order to coordinate future activities.

Enabling the Policy Environment for Private Sector Growth

The purpose of this three-week STTA was to assess how Liberia's land tenure arrangements might affect adoption by FED partner farmers of new agricultural practices and technologies. Of particular interest was whether or not farmers had sufficient security of tenure to merit investments that generate benefits over the longer-term. Additional topics of interest included how farmers gain access to land under customary and statutory systems, how people establish long-term land rights in customary areas, land acquisition strategies employed by women farmers, and the status of efforts to reform the tenure system, led by the Land Commission. Most attention was given to agricultural land tenure arrangements under customary systems, though key issues affecting statutory tenure, including the title deeds that prevail in Monrovia and along the coast, were also examined.

In carrying out the review, Lawry met with farmers, traditional leaders, and local officials in Bong and Lofa counties, and a number of Government of Liberia officials in Monrovia, including the chairman and other senior staff of the Land Commission. Additionally, he met with USAID mission personnel to discuss USAID-funded projects working on tenure reform, and with Liberian academics and other persons knowledgeable of Liberia's land tenure issues.

Lawry's conclusions cited that with care, land tenure should not be a constraint to the pursuit of FED's objectives of increasing agricultural production. Tenure security of land held under customary tenure is sufficiently strong for most farmers to accommodate long-term investments in agricultural. Lawry's report provides a checklist that FED staff can use to help assess the agricultural tenure status of farmers the project is considering supporting. The report also

recommends FED incorporate tenure measures into surveys of a subsample of the M&E sample. Additional recommendations included area-based studies and studies on special topics, such as land acquisition strategies used by women vegetable producers. Data collected and lessons learned should be shared in a systematic fashion with the Land Commission and USAID projects supporting the Land Commission, including LPIS and LCRP. The insights FED gains on agricultural tenure issues can help inform the development of future land policy.

Access to Finance

Achievement

Mary Miller completed an STTA in May targeted at continuing information collection and planning for facilitating access to finance. Meetings were held with additional financial institutions and prospective projects that may eventually qualify for bank finance. A presentation was made to FED staff on access to finance findings. Meetings were also held with IFC concerning its planned Investment Forum on Leasing to be held in June, which will include presentations on agricultural leasing and micro leasing (typically financial leases of less than USD 10,000). FED is making arrangements for the presentation on agricultural leasing to also be presented to all staff at FED in order to familiarize them with the capacity of financial leasing to provide credit for equipment acquisition. (Note: a financial lease is comparable to a bank term loan. The substantial difference is that the title of the equipment or vehicle being financed remains with the lessor during the financing period rather than the user if the equipment is purchased with a bank loan.)

The immediate activity in the coming months in access to finance will be to support the development of VSLAs among farmer groups in the regions where FED is working. However, this will include provision of financial support to CARE and other NGOs using standardized policies and procedures. FED may also look at using existing VSLAs as entry points to new farmer groups in the value chains. Information on costs of facilitation is being obtained so that FED can do MDFs or an RFP to source services.

FED will also start providing agricultural information to financial institutions, to further educate on advances in the value chains, and to build a transparent, strong relationship. Access to finance is expected to be a long-term activity, and no credit is expected to be immediately facilitated.

COMPONENT THREE: BUILD LOCAL HUMAN CAPACITY

During the quarter under review, April to June 2012 was devoted to establishing Centers of Excellence at BWI and Nimba County Community College.

On April 10, 2012, Kakata, the vocational educational specialist traveled to BWI, with Matthew Zoegar, FED IT manager. The following were the results:

- Discussion of the provision of office space for FED at the BWI campus for the VES and curriculum development specialist.
- Measurement of the distances between the four buildings for possible IT linkage on the campus.
- Work on the plan of action for the Agriculture Department with the administration of BWI.

The FED team met and discussed with Jacob Swee, the head of the BWI Agriculture Department, the need for the VES to spend a few days on the BWI Campus to work on a plan of action for the agriculture department with the principal and the head of the Agriculture Department. After their discussions, Swee assigned two students and one of his staff to help Zoegar measure the distances from the agriculture building to the new administration and science building, from the administration building to the proposed FED offices, and from the proposed FED offices to the new library.

Zoegar, FED IT manager, expressed that the present IT system that BWI is connected to cannot provide the internet services DAI needs and that the satellite they are connected to is 7-years old. They are currently using a shared connection 1:10 of 512, which means they have only 50 kbs to operate with. Power Tech expressed that their connections were up to 512 kbs, however, this proved to not be the case. Zoegar recommended that Power Tech is replaced with either CellCom or WAT.

The VES informed Swee that he will return to BWI to develop a plan of action, along with the principal for the agriculture department to be submitted to FED. Additionally, FED is interested in establishing an office on the BWI campus. Swee informed FED that the enrollment for the regular program of the agriculture department is 290 (87 females and 203 males) and for the accelerated program, the enrollment is 138 (32 females and 106 males).

During May 2012, the VES visited BWI and discussed the action plan prepared by the principal of BWI, the head of the BWI Agriculture Department, and the FED VES. The following was the agreement:

- BWI and FED should develop separate budgets based upon the various areas of responsibilities with dates of executions.
- The budgets should have budget notes.
- The plan should include the short-term training needs of the various sessions of the Agriculture Department.
- BWI should invite the stakeholders to their campus for a stakeholders' meeting to discuss the areas of the budget they would be willing to finance and to solicit their participation with the development of the curriculum.

The VES and FED's CD Advisor Mahawa Kaba Wheeler, held a meeting with John Flomo, president of the Bong County Community College who informed the VES and the FED-CDA of the following:

- The county has decided that they will operate a technical university and not a community college.
- The infrastructure will be completed by January 2013.

- The college will commence classes in September 2013.

The VES and the Soil Scientist, Matthew Curtis visited the office of IITA to inquire about their position with the soil laboratory at the UL. The lab at the UL has all the necessary equipment and testing materials and supplies; however, it is not functioning due to the lack of water and electricity. Assumana Henries explained that IITA has trained three laboratory technicians and is willing to train two more technicians at the master level, but the UL has not shown any interest. The UL has a serious communication problem.

On May 17, 2012, the VES attended a meeting in the conference room of FED to discuss the internship program with Walter Wiles of the UL. Representing FED was the COP, Jessica Stretz, Mary Miller, Chloe Wardropper, and the VES. Issues discussed were as follows:

- The Dean of the Agriculture College of UL, Roland Massaquoi had traveled, however, Wiles will inform him about the discussions.
- The UL is interested in the internship program for agriculture and the management students.
- The internship program is a good idea and the UL and FED should work together to have the program executed.
- The student population at the UL has more than doubled.
- The UL is asking the MoA to be involved with the UL agriculture extension program.
- The Vocational Technical College in Sinje has been turned over to the UL, and they are seeking FED support.
- The UL should think about engaging agriculture students with agri-business.
- Boima should arrange an appointment for Matthew Curtis with Wilse. From May 22-26, the VES was in Nimba and Bong counties for a visit to the FED's Nimba Office, the Nimba County Community College, the Doumpa Agriculture Project, the Venn Town Cassava Project, and the Bong County Technical University.

During the month of June, the vocational agricultural education specialist worked with the capacity development specialist, agribusiness specialist, and the ED specialist in coordination with the Education and Agriculture ministries to contribute to the development of programs focused on youth development.

Bradley A. Léger, youth VES, STTA from LSU, and Albert N. Bass, VES were responsible for carrying out the following activities:

- Developing potential youth programs for future farmers and agri-businesses.
- Conducted a two-day workshop for Booker T. Washington Institute and Nimba County Community College related to instructional development and delivery.
- Contributed to the assessment and upgrading of curricula at the Booker T. Washington Institute and the four other vocational training centers, with attention specifically toward women.
- Developed recruitment informational materials which encourage students (especially women) to consider a career in agricultural production and thus enroll in one of the Vocational Centers of Excellence.
- Explore the formation of an agricultural youth leadership organization for students studying agriculture in the Centers of Excellence.

Albert Bass and Leger conducted the below meetings:

On June 13, 2012, Albert Bass and Legar met with James M. Yarsiah Sr., executive director and chairman of the Right and Rice Foundation (RRF). This non-profit NGO deals with conflict resolution, promotion of democracy, literacy, numeracy, life skills, and governance. The purpose of this meeting was to see if FED and RRF could collaborate on potential programs involving youth and agriculture. Bradley A. Leger, Jessica Stretz, and Albert Bass from FED visited and had meeting with BWI and Nimba County Community College (NCCC). In conclusion of the meeting, FED, BWI, and NCCC agreed that FED should organize a faculty and staff workshop and stakeholder meeting to assess agriculture curriculum.

From June 14-16, 2012, the VES and youth VES held a two day teacher's training workshop for the teachers of BWI and a one day stakeholder's workshop. There were 10 teachers (eight males and two females) that attended the teachers' workshop and 19 (17 males and two females) that attended the stakeholders meeting at BWI. The following topics were discussed:

- Approaches to teaching and teacher as decision maker.
- Fundamentals and types of planning.
- United States' Ag-Youth Leadership Development model, including similarities with Liberia, needs of Liberians youth, and youth organizations which currently exist in Liberian schools.
- Differentiating instruction for diverse learners (including gender issues).

From June 18-20, 2012, the VES and youth VES also held a one day Stakeholders' Round Table Meeting and a two day teacher's training workshop at the Nimba County Community College. There were 42 participants (33 males and nine females) that attended the teacher's workshop and 13 participants (11 males and two females) that attended the stakeholder's meeting. The same topics at BWI were covered during the NCCC teacher's workshop.

Evaluations were provided at the conclusion of the second day of each workshop. The ratings overall were positive and a number of constructive comments were provided and taken into consideration

Recommendations

Booker T. Washington Institute and Nimba County Community College:

- Keep the two institutions updated on any research from other universities.
- Business and farm management courses should be considered to be added in new curriculum, and these skills should be integrated into the courses.
- Continue meeting as a stakeholder group on a regular basis.
- Cross-cutting issues should be integrated into all technical areas: integrated pest management, sustainable production, value chain and marketing.
- There should be a large group meeting with breakout sessions which will concentrate on specific technical areas – faculty members with business and industry, MoA, and university representatives.
- BWI and NCCC needs to invite individuals who are successful in the industrial and private sectors, including all occupations and entrepreneurs, etc. These individuals can set examples for faculty and students.
- There should be an establishment of a formal advisory committee which will include the key stakeholders and meet on a regular basis.

TRAINING CONDUCTED

Achievements

During the month of April, we trained a total of 1,369 people (690 males and 679 females) in the following subject areas:

- A two-day Business Skills Training for farmer associations in Gbarnga Bong County was held from January 2-3, 2012. The total number of participants was 29 (18 females and 11 males).
- From April 4-5, 2012, a two-day Business Management Skills Training for SMEs in the cassava value chain with the National Cassava Sector was held at the Royal Hotel in Sinkor, Monrovia. The total number of participants was 24 (10 females and 14 males).
- Three FED extension agents were trained on crop planning, input procurement, and testing of soil water to determine available nutrients in the soil and similar training was provided to two of the rainy season vegetable groups (Mount Barclay and Cocoa Factory communities) benefitting 40 farmers (31 females and 9 males).
- A three-day Business Management Skills training workshop for SMEs and producer groups was held in Monrovia from May 24–26, 2012. The total number of participants was 26 (nine females and 17 males).
- From May 1–31, 2012, periodic trainings were conducted by the peri-urban and urban agriculture. Farmers were establishing the nursery and sowing of seeds. The total number of participants trained was 270 (146 males and 124 females).
- A total of 342 farmers (165 males and 177 females) from the Doumpa Community Agriculture Project also received training in lowland rice and upland vegetable farming.
- From June 14-16, 2012, the VES and youth VES held a two-day teacher's training workshop for the teachers of BWI and a one-day stakeholder's workshop. There were 10 teachers (eight males and two females) that attended the teacher's workshop and 19 (17 males and two females) that attended the stakeholders meeting at BWI.
- From June 18-20, 2012, the VES and youth VES also held a one-day Stakeholder's Round Table Meeting and a two-day teacher's training workshop at the Nimba County Community College. There were 42 (33 males and nine females) that attended the teacher's workshop and 13 (11 males and two females) that attended the stakeholder's meeting.
- From June 13-22, 2012, rice production and processing demonstration training was conducted in Bong, Lofa, Nimba, and Grand Bassa counties.
- From June 4-8, 2012, a Business Skills Training Seminar for Liberian Farmer Associations was conducted in Nimba County. The total number of participants was 31 (15 males and 16 females).
- On June 1, 2012, a Business Skills Training Seminar for Liberian Farmer Associations was conducted in district #3, Grand Bassa County. The total number of participants was 31 (17 males and 14 females).

MONITORING AND EVALUATION

STTA Update

During the third quarter, Agricultural Economist Ray Greer completed the analysis and write-up of the baseline survey and presented key findings to FED staff and USAID. Rhona Walusimbi, another M&E STTA, arrived on May 16 to conduct a special study during May and June around food consumption patterns and income usage among potential FED intervention group. Her key findings were presented on June 13. Sudarshini Dharmawardane, TAMIS STTA, arrived in Monrovia on June 15 to provide technical assistance in developing a M&E database in TAMIS that will capture performance data for the project.

Staff Update

Two new staff members joined the M&E team in May for field office positions in Bong and Grand Bassa counties. The newly hired M&E coordinators received orientation on data collection methods, monitoring tools, and the on-going development of the FED M&E System from the M&E officers in Monrovia. They also attended the Managing for Results workshop provided by L-MEP in Voinjama, Lofa in late June.

Special Study

A Vegetable Seedling Special Study was conducted in each of the six FED's focus counties in July. In coordination with the Peri-Urban Team, FED county managers, the M&E specialist and special studies team leader, the study identified 31 vegetable seedling producers as short-listed candidates for the FED Vegetable Nursery Program. The objective of the survey was to survey vegetable seedling producers to assess current production site's setup and location, scope of seedling production and sales, inputs and costs for production, as well as challenges in producing and selling vegetable seedlings. The data collected from the survey is in the process of being analyzed and will be submitted in a final report.

Data Collection/Database Management

Development of the FED M&E system continued this month with the customization of FED M&E module on TAMIS. In addition to monitoring tools to capture data for FED indicators, the rain gauge data collection tool was finalized and the M&E assistant and GIS officer traveled to Bong, Nimba, Lofa, and Grand Bassa to train the county manager on the collection and recording of the rain gauge data.

Activities Conducted

Business management, vegetable production, and rice production trainings were conducted during this month and the M&E officers and coordinators traveled to Bong, Margibi, and Montserrado counties to collect data. Activities which occurred this month are illustrated by component area in the table below.

Baseline Survey

The M&E team has cleaned the FED baseline database. This involved cross-checking the interview data uploaded into the database from the mobile phones against hardcopy data collection instruments such as the Enumerator Interviewee Logs and Village Visited Trackers. All geographic data was thoroughly examined and revised to ensure each village's district and county level information was accurate and

consistent across the database. This will provide the program with a clean sample to draw from in the future for sub-sample, mid-term, and end line studies of the program. Baseline participant IDs were developed in line with the FED program’s participant training IDs which will assist the team in monitoring individuals sampled in the baseline study who become direct beneficiaries of the FED program.

The M&E specialist and special study’s team leader finalized the “FED Baseline Lessons Learned” document which will be incorporated into the final FED Baseline Report. Based on their experience implementing the FED Baseline Survey, the M&E team detailed challenges faced in the field as well as recommendations for future research. The recommendations are divided into three main components in the data collection process: (1) logistics and planning, (2) sampling strategy, and (3) monitoring and reporting. In addition, the document provides an appendix that includes examples of data collection tools, reporting templates, and checklists that may assist others in setting up and executing data collection in the future.

FED Baseline Lessons Learned finalized.

Outstanding Activities:

A companion document is being finalized by the mobile phone specialist on the team’s experience using mobile phones for the FED Baseline Survey entitled “Lessons Learned on Using Mobile Phones for Data Collection.”

Participant ID Trainings

The M&E team is receiving training on data cleaning, maintaining databases, and creating participant IDs with the special studies team leader. Instructions and exercises (both hardcopy and excel worksheets) have been compiled into a “Participant ID Toolkit.” Exercises include developing participant IDs on hardcopy tools, using excel formulas to generate participant IDs in worksheets, and identifying and reporting on errors within completed participant ID worksheets.

Outcome:

Five participant ID exercises developed, administered, and scored.

Table 1: FED Activities from April – June 2012

Activities for Component One: Agricultural Productivity				
Date	Activities	County	# of Farmers Trained	# of Groups
April – July 2012	Vegetable Production Training	Margibi	100	4
April – July 2012	Vegetable Production Training	Montserrado	200	9
June 2012	Rice Productions and Processing Demonstration	Bong	213	8

June 2012	Rice Productions and Processing Demonstration	Nimba	240	9
June 2012	Rice Productions and Processing Demonstration	Grand Bassa	106	4
June 2012	Rice Productions and Processing Demonstration	Lofa	213	8
June 2012	Tube well training	Nimba	1 Supervisor, 5 workers	NA
June 2012	Tubel well training	Bong	1 Supervisor, 6 workers	NA
Activities for Component Two: Enterprise Development				
May 2012	Business Management Skills Training for SMEs in the Cassava Value Chain	Montserrado	48	20
May -June 2012	Business Skills Training for Liberian Farmers	Grand Bassa	32	8
June 4 – 8	Enterprise Development	Nimba	31	16
Activities for Component Three: Capacity Building				
June 15 – 16	Capacity Building Teacher's Training	Margibi	8	1
June 19 - 20	Capacity Building Teacher's Training	Nimba	42	1

ENVIRONMENTAL COMPLIANCE

FED's Environmental Officer (EO), Othello Nyenkan, joined the project in June. In order to become familiar with the program and its current activities, all current projects were reviewed with a specific focus on environmental compliance. Four projects were presented to the COP for approval. Other projects are currently being finalized with the environmental officer's comments and recommendations to proceed.

The EO attended two workshops. One was held by USAID/PROSPER, and the other on June 18, 2012, was a two-day workshop held at the Mamba Point Hotel. The Peoples, Rules, Organizations, Supporting the Roles of Ecosystems Resource (PROSPER), hosted several local and international NGOs. The workshop was centered on knowledge sharing and developing strategies for the implementation of PROSPER's five-year intervention in Liberia.

The purpose of the workshop was to discuss how to reduce threats to biodiversity that are linked to livelihoods and how programs can take a coordinated approach to reducing threats to biodiversity from livelihoods.

FED also held an internal workshop to go through the project's MDF systems. This provided the EO with an opportunity to reinforce the definition and purpose of environmental compliance in current FED activities.

MARKET DEVELOPMENT FUND

The Market Development Fund (MDF) Acting Manager, Jessica Stretz, arrived in April for a four-month STTA that will focus on overseeing the day-to-day operations and management of the MDF. The acting MDF manager will meet with potential partners and collaborate with technical staff across components to ensure disbursement and management of the funds.

A one-day MDF training was held on June 25, 2012, for FED staff. The training provided an overview of MDF, TAMIS, and procurement. The training was facilitated by STTAs Gwen Appel, MDF Operations Specialist, and Jessica Stretz, portfolio manager.

FED Activity Table – APPROVED and LIVE ACTIVITIES

Activity Name	Description	Start Date	End Date	Approx. Value (USD)	Location (county, district)
COMPONENT 1					
Rice Production and Processing Demonstration	26 sites/partnerships with farmer associations in training by module (site selection, rice variety selection, land preparation, fertilizer application, seedling production, transplanting, irrigation, weeding, harvesting, and post-harvest). In addition, labor-saving production technologies (rotary weeders, power tillers) will be demonstrated.	5/21/12	10/31/12	\$30,000	Lofa, Nimba, Grand Bassa, Bong
Tube Well Installation and Training	Installation of tube wells, including a technique that increases the recharge rates of existing shallow wells. This includes the partnership with two local vendors in design and installation of wells.	5/24/12	6/30/12	\$2,000	Lofa, Nimba, Grand Bassa, Bong
Arjay Farms Out grower Expansion	Work with Arjay Farms in expanding and training additional out grower staff. In addition, provide Arjay with the necessary tools and training in order to process the significant increase in rice seed.	6/18/12	9/30/13	\$39,020	Montserrado
Vegetable	Identify approximately 30 independent vegetable	6/5/12	6/15/12	\$875	Lofa, Nimba, Grand

Seedling Special Study	seedling producers, and collect data on the following: production site's setup and location, scope of seedling production and sales, inputs, and costs for production as well as challenges in producing and selling vegetable seedlings. Lastly, determine the best candidates to be trained as commercial vegetable seedling producers through the FED Vegetable Seedling Program.				Bassa, Bong, Montserrado
Cassava Demo Site Training and Cultivation	22 sites/partnerships with farmer associations to increase farmer's capacity to increase the production of cassava, expand network of out grower farmers in cassava, and build sustainable and profitable cassava farming operations for cassava farmers in the target counties.	6/18/12	10/31/12	\$39,700	Lofa, Nimba, Grand Bassa, Bong
Vetiver Expansion Program	Develop plant materials that are effective at stopping soil erosion. Establish small nurseries of Vetiver to then be planted at demo sites.	6/29/12	10/31/12	\$5,630	Lofa, Nimba, Grand Bassa, Bong
MoA Participation at Scientific Conference of the Global Cassava Partnership in Kampala, Uganda	Mark Yarnlay, Program Officer, attended the Scientific Conference of the Global Cassava Partnership, held in Kampala, Uganda.	6/18/12	6/22/12	\$3,500	Montserrado
Private sector Soil Testing Expansion	Partner with local vendor to increase capacity in providing soil testing services to the Ag sector.	5/28/12	7/15/12	\$500	Montserrado
Phase I, Youth Nutrition Program	Build demonstration site to build and increase overall nutrition at orphanage. Train orphanage leaders and kids in vegetable farming and input supplies and provide technical assistance on goat	6/29/12	12/31/12	\$32,853	Montserrado

	health.				
COMPONENT 2					
Formation of National Cassava Sector Coordinating Committee	To facilitate the establishment of a sustainable system for coordination, advocacy, and information dissemination within the Cassava sector as agreed in the National Cassava Sector Strategy document.	6/1/12	9/30/12	\$10,075	Lofa, Nimba, Grand Bassa, Bong
Business Management Skills Training	Conduct three extensive trainings for SMEs in three counties.	5/23/12	6/8/12	\$14,527	Montserrado, Nimba, Grand Bassa
COMPONENT 3					
Staff Training and Curriculum Roundtable discussion at BWI and Nimba County Community College	Partnering with both BWI and NCCC, 1) conduct a two-day training on staff development at each institution; and 2) host a roundtable discussion with stakeholders to discuss curriculum development.	6/11/12	6/22/12	\$2,000	Montserrado, Nimba
University Internship Program – Phase 1	Partner with universities and vocation schools in establishing a three-month internship program for selected students and place them in Agro-business organizations.	6/1/12	9/30/2012	\$15,000	Montserrado, Nimba

TECHNICAL FIELD COORDINATION

Technical Field Program

Nimba

Doumpa Rice and Vegetable

The lowland rehabilitation is about 80% complete on the 2.232 ha. This includes: de-stumped trees cut and debris cleared, peripherals dug, head dyke constructed, tail dyke over 60% constructed, main canal constructed, sloping of main canal initiated, peripheral bunds constructed, lateral and inner bunds constructed, etc. On the upland vegetable site, one hectare of land burned and cleared, digging up to 60%, platform nursery built, and sowing of seeds on nursery completed.

Vegetable Nursery Preparation:

At the fringes of the 2.232 ha of lowland, one ha of upland is being utilized for growing vegetables, while the nursery has been a training ground for the farmers who continue to ask for training.

Outstanding Activities

- Complete all water control structure in the field.
- Lowland (plot) land preparation completed.
- Rice nursery preparation and seed sowing continues as transplanting is on-going.
- Digging of plots completed.
- Land preparation for vegetables.

Bong

The Bong County field office over the period was involved in a series of activities ranging from farming groups identification, holding farmers meetings, verification exercise to screen the groups already identified and participation in the regular county coordination meeting.

Programme Activities

- The county team over the period reinforced their efforts by starting to build relationship with groups already identified through regular engagement during site visits to their fields. Five groups (Tohlo women in Palala; Zensue farmer's association; Arise and Shine in Maimu/Totota; Balela rural women structure; women rice production in Gbarnga) have been identified to participate in the lowland rice demonstration training in five districts (Panta, Kpail, Salala, Jorquelleh, and Yealequelle) in Bong County.
- Similarly six groups (Palala rural women, the women's groups in Welekama, Kporma, Yeapukeima, and Janyea Kponmaand Willing, as well as women in Totota) have also been identified to commence the cassava demonstration with them. These groups are already into production, however, in principle they agreed to provide a land space to carry out the demonstration.
- During the site visits to verify most of the group's activities, it was revealed that all of them are still cultivating their cassava traditionally rather than the FED development mound and ridge method.
- There were specific discussions with two other rice producer groups (Kwapageh in Gaimu and Panta districts, and the Gbansue Development Association) which FED believes should be

considered for small-scale production activities by providing some level of technical support. These are groups already in the operation of their normal production activities on the large scale, which has the potential of making greater community impact.

Outstanding Activities

- Commence signing of MOUs with the identified groups for the lowland rice demonstration activities, now that the MOUs have been finalized
- Finalize plan with Rice Officer to commence the training for Extension Officers in Bong County
- Commence lowland rice demonstration training with the selected groups will sign the MOU
- Commence purchasing of Cassava cuttings for the cassava demonstration and provision of training

Grand Bassa

The Grand Bassa County team demonstrated mounds and ridges to interested individual cassava farmers.

During this quarter, the team received a power tiller to be used for rice demonstration in the FED rice intervention districts.

Outstanding Activities

- The signing of the MOU between farmer groups and FED to start operation.
- Provision of initial rice seeds and some basic tools for demonstration purposes.

Lofa

The Lofa County team during the period under review in collaboration with the district agriculture officers conducted an assessment of farming groups in the county. Refer to table for results.

PROJECT MANAGEMENT AND ADMINISTRATION

Administration and Logistics

Achievements

During this quarter, FED continued to provide effective administration and logistical support to program and administrative staff, while assuring contract compliance. Highlights of this quarter, from April – June 2012 include:

Staff Recruitment, LTТА:

- As of this quarter, FED has 49 CCNs.

The IT department performed the below tasks in four field offices, Grand Bassa, Nimba, Bong, and Lofa counties respectively:

- Set up Network printer.
- Set up cabled and wireless router.
- Set up of desktop computer.
- Provided other support as required.

Mark Nolan, FED ED specialist, joined the Monrovia FED Team on March 20, 2012. He died unexpectedly from natural causes on April 5, 2012. The HR team and FED's COP and DCOP worked with Mark's family to repatriate his body and his belongings. Jonathan Greenham, the FED COP, attended Mark's funeral in Jamaica on April 21, 2012.

On June 8, 2012, the Logistics Department received the below listed IT equipment:

- 454273-001-SP, HP Hard drive – 1 TB – SATA – 300 (1 piece).
- Porttech 2 Channels VOIP GSM Gateway (1 piece).
- EJ0022B, HP Storage works D2D2504i Backup System (1 piece).

Short-Term Technical Assistant, Gwendolyn Armstrong, project coordinator-economic growth conducted orientation training for the HR department on operations and functions of TAMIS. This also included the set up, and creation of HR organic grams, and draft of a SOW for local staff, employee addendum, FED Reference Check Form, Employee Information Sheet, Summary of Employee Benefits Template, FED Full Time and Part Time Employment Contract Template, and Performance Management and Improvement Plan Templates.

ONE CAMPAIGN

During the reporting month of June 2012, a twenty person delegation from USG, including both Democrats and Republicans visited FED activities in Margibi County. The team visited BWI in Kakata City, Margibi County, and had a meeting with the administration, faculty, and students. The meeting was as assessment of needs, and how the USG assists in meeting those needs. They toured the institution's Compost Building and Agriculture field.

By 2015, Feed the Future (FTF) aims to help an estimated 332,000 vulnerable Liberian women, children, and family members – mostly smallholder farmers – escape hunger and poverty. More than 96,000 children will be reached with services to improve their nutrition and prevent stunting, and child mortality. Agriculture development assistance funding through FTF has ranged from between \$20 and \$25 million during the years 2009 through 2011. USG long-term food aid programs compliment agricultural development in Liberia.



Picture 12: Members of the ONE CAMPAIGN look on as the director of agriculture at BWI explains his department's achievement in the field.

FTF resources have primarily focused on the agricultural breadbasket counties of Bong, Nimba, Lofa, and Grand Bassa. Sixty percent of rice and cassava farmers are located in these counties. FTF hopes to build development corridors to attract new investment and create demands for services that local and international entrepreneurs will strive to fill. In concert with MoA priorities, investments will center on rice, cassava, goats, and vegetables.



Picture 13: ONE CAMPAIGN Team Leader, Michael Elliot, explains the purpose of his visit to BWI's administration, faculty and agriculture Students.

On June 16, 2012, a member of the delegation, Morgana Wingard, photo journalist, visited one of FED interventions in Doumpa, Nimba County. During her visit to Doumpa, photographs were taken and farmers were interviewed on how they are trained and their goals after training by FED on improved agriculture skills and business management.

The farmers told Morgana, that they will take the knowledge gained from FED to their personal farms and apply them to improve and increase their production level and profit.



Picture 14: Morgana Wingard, photo journalist, in conversation with a vegetable farmer (Annie), Dumpa Community project site

ANNEX I: Materials from Business Skills Training- Making an Operation and Production Plan

<p>Content of Session</p> <ul style="list-style-type: none"> • Roles of operation and production plan in the business plan. • Components of the operations and production plan. • Process of operation and production plan making. <p>A production (manufacturing) and operation (services) plan help to do the following.</p> <ul style="list-style-type: none"> • Examine feasibility of marketing plan. • Propose production alternatives. • Provide inputs for making financial plan. 	<p>3.1.1 How to produce your product at a profit</p> <p>This will:</p> <ul style="list-style-type: none"> • Examine the feasibility of the marketing plan. • Propose production alternatives. • Provide inputs for making the financial plan. <p>Looks at how the product will be made and the budget for doing it. Can products be produced on time? Should focus be on risk analysis? Timing is critical because if you can't meet your deliverables on time, your customers may be tempted to head to competitors.</p>
<p>3.1.2 Content of a Production Plan</p> <ul style="list-style-type: none"> • Description of product and proposed production volume. • Description of production procedures. • Plans for equipment and machinery. • Plans for raw materials and other resources. • Estimation of operation costs (cost of investment and cost of production). • Operating competitive advantages. • Risk Analysis. <p>3.1.3 Production Planning Process (slides) Components include:</p> <ul style="list-style-type: none"> • Current production capability – how many employees, size of building. <ul style="list-style-type: none"> - Direct labor (to actually produce the product). - Indirect (administrative and management, finance, etc.) • Competitive advantages 	<p>3.1.4 Determine production quantity:</p> <p>This depends on:</p> <ul style="list-style-type: none"> • Revenue proposed in marketing plan. • Stock holding policy (should always have an extra in case of a shortfall) e.g. always have five bags in hand. This applies to both raw materials and finished products. <p>Question how do you preserve cassava – cold storage, bury it, or store as grated cassava?</p> <p>Three bags of cassava = 1 bag of gari.</p> <p>Planting can be staggered to always have some raw material coming in.</p> <p>Production quantity = Revenue (sales) + desired stock level.</p> <p>Sales volume is not equal to production volume as there should always be a stock reserve.</p>

<ul style="list-style-type: none"> • Production quality. • Product structure. • Production procedures. • Plans for raw materials and other resources. • Plans for equipment and machine. • Cost of investment. • Cost of production. 	<p>3.1.5 Determine cost of investment:</p> <p>Total cost of investment includes:</p> <ul style="list-style-type: none"> • Land and infrastructure – roads, internal to property, fences, wells. • Building and plants. • Machinery and equipment. • Working capital: Cash in hand, or what can be converted to cash, or stock levels required, work in progress, raw materials that can be sold, or finished product. • Environmental considerations, or special considerations as food production is involved. <p>3.1.6 Risk Analysis</p> <p>This looks at all that could possibly go wrong, including categorizing them into low, medium, or high.</p>
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4.0 Key learning acquired in the workshop

- When developing a business plan, start with the summary.
- Conduct comprehensive research.
- Develop a plan for starting new business.
- Development of a production and operation plan.
- Marketing plan.
- Conducting market research.
- High level of business communication.
- Possible investment in the cassava sector.

The overall workshop was one that provided participants a great deal of information and skills in writing a business plan, with a response that was appreciative to both FED and the facilitator.

5.0 Key Recommendation for SMEs in Monrovia:

- Hold a two-day working session with SMEs on the ED plan in order to prepare them to meet the basic requirements of being an enterprise and provide strong linkages with financial service providers to access funding and expand their production.
- Support SMEs that are involved in production support through Agriculture inputs to expand production.
- Provide SMEs with training in post-harvest losses.
- Link SMEs to potential buyers.
- Provide SMEs basic training in production, processing, and preservation.
- Provide basic training to the Cassava Sector Coordinating Committee to enable them to properly coordinate SMEs in the cassava value chain thereby providing useful and timely information to SMEs about price, quality, and value addition.

6.0 This component of the report covers both seminars in Grand Bassa and Nimba Counties with Producer Groups/Liberian Farmers Association:



Cross section of participants at the Grand Bassa County Seminar



Cross section of participants at the Nimba County Seminar

Both counties cover the same materials and were five days in length. Highlights of day one cover the following:

- Business idea
- Business Management
- Forms of Business
- Challenges and opportunity as it relates to transforming farming into business/enterprise

Day-1

7.1 Business Idea

7.1.1 This session is intended to enable clients to identify the critical information that is needed to plan a new business.

<ul style="list-style-type: none"> • What product or services is the business going to provide? • Who will be the customer, and why will they buy from this business rather than from its competitors? • What important equipment or materials and supplies will be needed, where, and when will they be obtained, and how much will they cost? • Who is starting the business and what skills and experiences does she/he have, which should enable him/her to succeed? • What is the best guess for total revenue, costs, and resulting profit or loss during the first month, year, or whatever period of relevance? When is the business expected to be profitable? • How much money is needed to set up the business and keep it going until it starts to make a profit? • Who is going to provide this money? If it will have to be borrowed, 	<p>Form of the Business:</p> <p>How are you registered? In Liberia, one generally uses a lawyer, and an application is made to Ministry of Foreign Affairs, and then the Ministry of Planning and Ministry of Commerce. Different groups are registered differently.</p> <ul style="list-style-type: none"> • Sole proprietorship – one man business. • Corporation or company. • Partnership with 2 or 3 people. • Cooperative – group that comes together and produces something together. • NGO (this is a big NO if you want to make money). 	<p>Business Management:</p> <ul style="list-style-type: none"> • Transportation of produce from other farmers. • Industrial/Mechanized farming. • Putting in the right structure and system for the smooth operation of the business. • Pay workers. • Establish cooperative farming. • Increase size of farm from one acre to 10 acres. • New methods of planning. <p>Take ownership of the project</p> <ul style="list-style-type: none"> • New methods of processing and marketing of cassava products.
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when can it be paid back, and what security will the lender have?		
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Farmers group	Challenges	Opportunities	Remarks
YOFAP	<ul style="list-style-type: none"> • Land • Farming tools • Chemicals • Access to finance • Bad road conditions 	<ul style="list-style-type: none"> • Food security • Increase in production • Finding better markets 	<p>There is a need for additional training in production, establishing linkages to access funding and loans, information sharing on market access, and support to cooperatives to share knowledge and information.</p> <p>There is a need to provide technical and if possible agriculture/farming implements support to all of the producer groups FED have identified and closely monitor them through the extension officer.</p>
FED	<ul style="list-style-type: none"> • Access to market information • Training • Farm maintenance • Manuel farming tools • Access to loan 	<ul style="list-style-type: none"> • Capacity building • Increase in productivity • Availability of land • Access to farm sites 	
Come & See	<ul style="list-style-type: none"> • Land • Farming tools • Chemicals • Market linkages • Bad road condition 	<ul style="list-style-type: none"> • Improvement in farming methods • Workforce development • Access to loans 	
Care for one another	<ul style="list-style-type: none"> • Farming tools • Finance • Agriculture seeds • Bad road conditions • Land • Machinery 	<ul style="list-style-type: none"> • In one year large farms/more members • Access to finance • Helping community members 	
Helping Each Other	<ul style="list-style-type: none"> • Lack of work force • Land tenure • Lack of chemical • Lack of improved quality of seeds • Bad road condition 	<ul style="list-style-type: none"> • Access to market • New method of processing/preservation • Market linkages • Capacity building/training 	
Something for	<ul style="list-style-type: none"> • Farm to market road 	<ul style="list-style-type: none"> • Access to market 	

Something	<ul style="list-style-type: none"> • Access to finance • Working and farming tools • Availability of land • Lack of training site 	<ul style="list-style-type: none"> • Increase in production • Access to loan • Construction of community clinic 	
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LUFPID	<ul style="list-style-type: none"> • Training facility for agriculture • Seedling • Access to finance • Health facility • Farming tools • Education facility 	<ul style="list-style-type: none"> • Increase in production • Market linkages 	<p>When all of these are put in place, farming in Liberia would be improved.</p> <p>Mechanization such as power tillers and thrashing machines are needed. Linkage to buyers is important.</p>
We will do it	<ul style="list-style-type: none"> • Bad road condition • Access to finance • Short duration crops • Lack modern methods of farming • Lack farming tools 	<ul style="list-style-type: none"> • Market linkages • Education for their children • Increase in production 	

Day II

8.0 The second day of the training focuses on:

- Strengths and weaknesses in managing a successful agriculture business.
- SWOT analysis inside the business.
- Component of a successful agriculture business.
- Introduction to financial planning.
- Recap of day 1.

8.1 Objectives:

- Identify strengths and weaknesses of individual farmers as focal points for corrective change in ED in the agriculture sector.
- Identify strengths and weaknesses of existing or planned enterprises as the basic resource base for the creation of strong agriculture enterprises.

Recap of Day I:

- Agriculture as a big business in Liberia.
- Various form of business.
- Challenges and opportunities as it relates to business.

- Business ideas.
- Finding markets.
- Challenges and opportunities as they relate to transforming farming into business and enterprise.

8.2 Strength and Weakness in Managing a Successful Agriculture Business:

Strength	Weakness
<ul style="list-style-type: none"> • Mobilization • Planting • Business • Research • Laying out nursery beds for preparation • Field work 	<ul style="list-style-type: none"> • Not good at Business • Not good at selling • Not good at rice farming • Not good at brushing • Not good at chemical application
<ul style="list-style-type: none"> • Doing business • Managing money • Good at finding good market • Good at selling • Good at keeping record • Good at business planning 	<ul style="list-style-type: none"> • Not good at business • Not good at selling • Not good at rice farming • Not good at brushing • Not good at chemical application

8.3 SWOT Analysis Inside the Business

Strengths	Weakness
Has cassava farm	No equipment No finances
Opportunities	Threats
Demand for gari locally, regionally, and internationally	Competitors Market can change and demands could drop

Name of Producer Group: We will do it

Strengths	Weakness
Swamp Rice Production	Modern farming equipment No finance Short-duration rice

	High cost of production
Opportunities	Threats
High demands for rice	None

Name of Producer Group: Liberian United for Food Production

Strengths	Weakness
Cultivated six acres of land for production	Lack access to finance No storage facility
Opportunities	Threats
High demand for vegetable production on the Liberian market	Decrease in price

Name of Producer Group: Family Friends for Production (FFP)

Strengths	Weakness
Swamp rice One hectare layout Trained technicians Work force of 35	Lack of improved seed rice Lack of manual tools No finance and limited capital for storage
Opportunities	Threats
High demand for rice consumption and multiplication locally and internally	None

Name of Producer Group: YOFAP

Strengths	Weakness
Labor force Five hectare of pepper and corn	Lack of pesticides Lack of storage
Opportunities	Threats
High demand for peppers and corn and opportunity for regional sales and sales to company	Competition and theft

Name of Producer Group: Caring for One Another

Strengths	Weakness
Five ha of cassava Workforce of 26	Old method of planting Lack of farming materials Lack access to finance Damage of plants
Opportunities	Threats
High demand of cassava in the Liberian market	Decrease in price Bad road condition

Name of Producer group: Something for Something

Strengths	Weakness
Cultivated two acres of land for production of rice and cassava	Lack of equipment No finance Lack technical assistance Short life of cassava
Opportunities	Threats
High demand for rice and cassava on the Liberian market	Decrease in price Bad road condition

Name of Producer Group: Liberian United for Food Production

Strengths	Weakness
Cultivated one acre of land for vegetable production	Lack access chemical Lack of tools and seeds Lack access to storage
Opportunities	Threats
High demand for vegetable production on the Liberian market	Decrease in price Predators

8.5 Session-4 Component of a Successful Agriculture Business:

<ul style="list-style-type: none"> • Forms of Business • Market Research • Customer-who will buy your products • Competitors-who is selling the same products • Products, prices, promotion, and places • Regional market and sales team 	<ul style="list-style-type: none"> • Make a marketing plan (product, Pprice, promotion, and place) which is refered to as the 4Ps of marketing • Human Resources Plan • Legal responsibilities • Taxes, insurance, license, and permit • Production plan • Equipment/tools • Costing your products/services • Record keeping
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Input	Possible sources	Notes
<ul style="list-style-type: none"> • Cash Require • Skills needed • Raw materials • Market Avenue • Transportation 	<ul style="list-style-type: none"> • In kinds from NGOs for cash • From MFIs, banks, and FED • Internal and external contribution • Shareholder's contribution • Money borrow from saving clubs • Personal income • Training from NGOs • Training from FED & MoA • Agriculture training from high school • Local markets • NGOs • Other farmers • Regional sources • Local and regional markets • Companies and supermarkets • Mobile sales in trucks 	<p>Investment Capital is the initial capital invested in the business</p> <p>Retained profits money from profit added to the business growth</p> <p>Contributions from shareholders of the business</p>
<p>Budgeting Process:</p> <p>Materials needed plus cost</p> <p>Labor cost</p> <p>Projected sales/future sales</p> <p>Expected profits</p>		
<p>Steps in Business Plan Writing including legal responsibilities:</p> <p>Business idea</p> <p>Executive summary</p> <p>Form of business</p>		

Market research and plan	<ul style="list-style-type: none"> • NGOs • Commercial vehicles • Owned truck • Buyers come to farm gate 	
Costing your product		
Staff plan		

Day III

The third day of the training focuses on:

- Continuity of a successful agriculture business.
- Costing of product.
- Market analysis.
- Business planning.
- Legal responsibility.
- The 4Ps.
- Recap of day.

8.6 Legal Responsibilities and Insurance:

Taxes (sales tax, employee's income tax, and taxes on business profit)

License and permit (business license and registration)

Employees (minimum wage, working hours, holidays, health, safety, and sick leave)

Staff (which include manager and below as per the structure)

8.7 Costing your Products:

- The important of costing the products
- Types of costs
- Direct costs – production of products
- Indirect costs- for running the business

Step 1- Direct material cost: (raw material cost, buying cost, quantity per item, and cost per item).

Step 2- Direct labor costs: (employees total working hours per month, total monthly pay, and hours in product per month, pay for time in production).

Indirect will include (hour not in production per month and pay for time not in production).

Step 3- Calculate indirect cost per month (Rent, electricity, water, insurance, interest on loan, depreciation and miscellaneous).

Step 4- (Calculating depreciation cost on equipment.)

8.8 Require Start-up Capital and the 4Ps

- Investments (business premises and equipment).
- Working capital (stock of raw materials or final product including promotion, wage, rent, insurance, and other costs associated with the start up).
- The 4Ps include product, price, place, and promotion.

Day IV (May 31, 2012):

The fourth and fifth day of the training considered the following:

- Business planning.
- Risk factors
- Financial planning.
- Steps in writing sales and cost plan and the recap of previous day.

Recap of Day III

- Market research including target market.
- Legal responsibilities and insurance.
- Costing products.
- Require start-up capital.
- Working capital.
- Market share and size.
- 4Ps of marketing.

9.1 Business Planning:

Two reasons why we go into business:

- Make profit.
- Sell large volume of products.
- SMART objective is one that is Specific, Measurable, Achievable, Realistic and Time bound

Example of SMART Objective is as follow:

The objective of my company is to produce and sell 100 bags of gari in one month.

9.2 Risk Factors

What could go wrong with the business?

<i>Risk</i>	<i>Possibilities (L, M, & H)</i>	<i>Contingency</i>
Change in price	M	Keep it change form
Pest/disease	L	Buy chemical
Climate change	Unlikely	-----

Labor shake	L	Negotiate
Thefts	M/L	Employ security
Bad raw materials	M	Inspection and test
Break down of equipment	L	Buy new equipment

9.3 Session 5 -Financial Planning:	Steps in Writing Sales and Cost Plan	Cash Flow Plan
<ul style="list-style-type: none"> • How to make profit • Ensure not running out of cash • Plan for profit and cash flow • To plan a profit, make a sales and cost plan • To ensure not running out of cash, do a cash flow plan 	<p>Forecast indirect costs each month for the first year as follow:</p> <ul style="list-style-type: none"> • Rent, indirect labor cost, depreciation, license, electricity and water, miscellaneous, interest on loan, promotion, stationery and supply and transportation, phone bill • Forecast direct material cost per item • Forecast direct labor cost per item • Forecast sales for each month per item • Calculate the total direct materials costs • Calculate total direct labor costs 	<p>Is the plan that forecast cash in (sales, retained profits, and other sources) and cash out (raw materials, direct labor cost and indirect cost).</p>

Note: The sales and cost plan shows sales, cost, and profit monthly

9.4 Overall challenge comments:

- The consultant presentation was very excellent but her level was too high for the rural farmers/farmers association.
- Responding to farmer's concerns during the training regarding support (farming implements/equipment)
- Having the rural illiterate farmers cope with the training was a challenge because of the language barrier

9.5 Overall recommendation:

- The consultant is excellent, she needs to deal with the SMEs in Monrovia and ToT for local consultants and the literate farmers, in order to prepare them to train other illiterate farmers as a means of getting them to easily understand and cope with the training. The farmers need the training to be simple and in Liberian English.
- There is a need to provide support to these farmers with Agriculture farming implements (seeds and tools) as a startup using a strategic approach that would make more impact.
- There is a need to hire locals to conduct the training with the farmer's association as they will provide examples from the Liberian context and in Liberian English which could easily be understood by the farmers.
 - The MoA Agriculture Extension Officer participated in FED training since.

