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# FOOD AND ENTERPRISE DEVELOPMENT PROGRAM FOR LIBERIA (FED)

**SECOND QUARTERLY REPORT: JANUARY 1 – MARCH 31, 2012**



**APRIL 2012**

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# **FOOD AND ENTERPRISE DEVELOPMENT (FED) PROGRAM FOR LIBERIA**

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<b>Authors:</b>	<b>Nelson Kanneh Jonathan Greenham</b>

<b>Cover Photo:</b>	<b>Mount Barclay – Demonstration Site, Urban and Peri Urban Vegetable Production Training Session (Direct planting of Okra)</b>
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### **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

AGRA	Alliance for a Green Revolution in Africa
ASRP	Agriculture Sector Revitalization Program
ASRP	Agriculture Sector Revitalization Program
BWI	Booker Washington Institute
CARI	Central Agriculture Research Institute
CEDPA	Centre for Development and Population Activities
CRS	Catholic Relief Services
EMMP	Environmental Monitoring & Mitigation Plan
FAO	Food and Agriculture Organization
FAO	Food and Agriculture Organization
FMD	Foot & Mouth Disease
FTF	Feed the Future
GATE	Greater Access to Trade Expansion Project
GIZ	German Technical Cooperation
GOL	Government of Liberia
HDF	Human Development Foundation
HO	Home Office
HQ	Headquarter
HR	Human Resource
ICT	Information and Communications Technology
IEE	Initial Environmental Examination
IFAD	International Fund for Agriculture Development
IFDC	International Fertilizer Developmental Center
IITA	International Institute of Tropical Agriculture
IPDs	Import Permit Declarations HO,
IR	Intermediate Result
ISPs	Internet Service Providers
LAC	Liberia Agriculture Company
LEAP	Local Enterprise Assistance Programme
LEED	Liberia Entrepreneurial & Economic Development
LIGIS	Liberia Institute of Statistics and Geo-Information Services
LMC	Liberia Media Center
L-MEP	Liberia Monitoring and Evaluation Program
LOL	Land O' Lakes
LTTA	Long Term Technical Assistant
MDF	Market Development Fund
MOA	Ministry of Agriculture
MOCI	Ministry of Commerce and Industry
MYS	Ministry of Youth and Sports
NGO	Non Governmental Organization
PIR	Project Intermediate Results
PPR	Peste des Petits Ruminants
PTL	Project Team Leader
PUA	Peri Urban Agriculture
SIDA	Swedish International Development Cooperation
SOW	Scope of Work
STTA	Short Term Technical Assistant
TAMIS	Technical and Administrative Management Information System

TVET	Technical Vocational Education Training
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
WARDA	West Africa Rice Development Association
WFP	World Food Program
ZRTTI	Zorzor Rural Teacher Training Institute

# CHAPTER I: SUMMARY OF PROGRAM OBJECTIVES AND RESULTS

## PROGRAM OBJECTIVES

The Food and Enterprise Development (FED) Program in Liberia is a United States Agency for International Development (USAID) funded project that aims to work with the Government of Liberia (GOL) to increase agriculture productivity, profitability and access within the rice, cassava, vegetable and goat value chains, improve nutrition and strengthen food security. FED is focused on four priority counties (Grand Bassa, Bong, Nimba and Lofa) and two secondary counties, (Magribi and Montserrado). FED will be working with partners (public and private) throughout these four value chains; improving productivity, strengthening access to inputs and services, and creating market linkages, with a particular focus on women and youth. The objectives of the program are:

- Increase agriculture productivity and profitability and improve human nutrition;
- Stimulate private enterprise growth and investment;
- Build local technical and managerial human resources.

FED's activities will work with the Ministry of Agriculture and the private sector to link communities to agricultural inputs (including improved seeds), extension services, nutritious food products, processing services, market information, transportation, credit, and appropriate education, training, and enterprise services.

Over the life of FED, expanded market linkages will lead to substantial income and job growth and major increases in the production, processing, marketing, and nutritional utilization of rice, cassava and vegetables in Bong, Lofa, Nimba, Grand Bassa, Montserrado, and Margibi counties. These counties are being targeted in the context of regional development corridors that foster intra- and inter-county commerce, simultaneously improving food availability and access for all Liberians.

A Market Development Fund (MDF) will be available to help build Liberian capacity — partnering across the public sector, private sector, and civil society — to ensure ownership of FED-supported activities prior to the program's conclusion. MDF funds will be administered through carefully structured local subcontracting arrangements. Every allocation of MDF funding will be underpinned by an exit strategy that extracts the FED program from its interventions without compromising market development.

FED's methodology is market-led, value chain-driven, continuously dedicated to indigenous capacity building, and specifically focused on benefiting Liberia's women and youth. Our approach aims to be collaborative, catalytic and driven by the goals and objectives of our partner clients. It will lead to increases in incomes for rural households, new employment opportunities for Liberians, increased access to food and improved household dietary diversity scores for food-insecure Liberians, and the adoption of improved inputs, farming practices, and technologies that boost agricultural productivity.

## CHAPTER II: PROGRESS TO DATE

This second quarterly report reviews accomplishments under Intermediate Results (IR), Project Intermediate Results (PIR), cross-cutting activities, and project administration and management. For each, we have indicated progress towards key results, what activities were successful as well as those that did not go as smoothly as was hoped. These assessments summarize our own performance with regard to our indicators, targets and benchmarks outlined in the first annual work plan.



## COMPONENT ONE: INCREASED AGRICULTURAL PRODUCTIVITY

A number of PUA activities have been undertaken during Quarter 2 of the FED Project.

### STAFF RECRUITMENT

One trainer and two extension agents were hired in January following a recruitment process that included candidate interviews and testing. William Dent was hired to a short-term consultancy contract as the vegetable production trainer on January 26. Ivey Gopyer and Flomo Pewu were hired to short-term consultancy contracts as extension agents on January 30. All three of these short-term contracts were transformed into a long-term employment contracts at the end of March.

Dennis Wilson was hired as the project's manufacturer trainer over several other candidates. In addition to the treadle pump, he will assist in the introduction of other technologies (e.g., tube wells and crop dryers) to be introduced by the project.

Noorie Dudley was hired mid-March as the project's local Peri-Urban Agriculture Specialist. With the expatriate Peri-Urban Agriculture Specialist, Ms. Dudley will be responsible for identifying and orchestrating interventions to address weaknesses in the vegetable value chain that will increase production and incomes.

Dermot Cassidy, the expatriate Peri-Urban Agriculture Specialist was also hired at the end of March and will work with Noorie Dudley to strengthen the vegetable value chain. He will hold an intermittent long-term position for a period of four years.

### Task 1.7 – Peri Urban Vegetable production

#### *Achievements*

#### **Activity 1.7b- capacity Building**

##### Training of trainers

In mid-January Lassane Zongo, small-scale irrigation equipment specialist, arrived in Liberia. He trained FED Manufacturer Trainer Dennis Wilson in the fabrication of the treadle irrigation pump starting with the specialized tooling necessary to ensure pump quality and interchangeability of pump parts. The FED Agribusiness Specialist trained Dennis Wilson in pump installation, use, maintenance.

Following his agronomic assessment, Dermot Cassidy, the FED expat Peri-Urban Agriculture Specialist, will train the PUA staff in state-of-the-art vegetable production practices.

### **Activity 1.3- Vegetable farmers' identification**

#### Vegetable production trainee selection

The process of vegetable production trainee selection began in late December 2011. Six groups of individuals were identified at that time based on a set of producer selection criteria that included: production of local mostly leafy vegetables; expression of interest in the production of higher value vegetables; and, location in areas with adequate water and land as well as established market linkages.

The individuals selected reside in the locations that follow:

- Coca Cola Factory
- Zay Zay Community
- 72<sup>nd</sup> Community
- Todee
- Mount Barclay
- Kakata (Division 31, Firestone)

280 individuals signed up in late December and early January. However, over the following weeks, it became clear that many of the names on the list were no more than that. Between January 26 and January 31, in discussions with representatives of the groups, project staff determined which individuals of those who originally registered were seriously interested in receiving training and meeting the conditions for participation, including performing the necessary land preparation before the start of the actual training. On January 31 a list of 153 participants was finalized.

Based on a previously developed MOA program, training started on February 1. That original program was adapted to localized conditions and has benefitted from expert technical input obtained from the Peri-Urban Agriculture Specialists.

#### Vegetable demonstration site establishment at Kakata

On December 22, 2011, the development of a demonstration site in Kakata was begun. The site is located on the grounds of the MOA county office and currently contains a variety of vegetables, including cabbage, lettuce, onions, sweet corn, Cayenne pepper, sweet pepper, and carrots. They will reach maturity during the course of the quarter ending June 30, 2012.

### **Activity 1.7b Capacity building**

#### Training of vegetable growers

Led by the PUA vegetable production trainer, William Dent, the PUA staff began training the 153 urban and peri-urban vegetable growers in and around Monrovia in the production of exotic vegetables. Four vegetables were chosen – onions, watermelons, Cayenne peppers, and okra. Farmers were trained



Demonstration of treadle pump by FED sponsored manufacturer

in garden layout, planting, seedling production, soil amendments, irrigation, and the importance of weeding. Due to the late planting of the vegetables, many plants showed signs of stress caused by the lack of irrigation water. Shallow wells exist but have very limited capacity beginning in February. Plants also exhibited signs of insect and virus attacks.

#### Training treadle pump manufacturers

Two metal workshops were trained in treadle pump fabrication in Gbarnga and one in Ganta – the first two were trained by staff manufacturer trainer Dennis Wilson and short-term technical assistant Lassane Zongo working together and the last one by Dennis Wilson alone. A total of nine workers were trained, three in each shop. They were subsequently trained to install, use, maintain, and demonstrate the pump.



FED sponsored treadle pump manufacturer training session

Manufacturer selection criteria included:

- Ownership of a functioning metal workshop producing good quality metal products, including agricultural equipment, for rural Liberia
- Possession of basic metal working equipment (arc welder, drill, grinder, metal shears, etc.)
- Stock of metal supplies, indicating a certain financial capacity
- Location within a reasonable distance of peri-urban market gardeners with land available for irrigated high value vegetable production

#### Farming and manufacturing activities

Since the initial trainings in manufacturing and vegetable production, project staff has monitored the metal workers and the growers in their respective activities. In the case of the manufacturers, the quality of production has been generally very good. The two Gbarnga manufacturers have each received an order from German Agro Action for eleven pumps and were manufacturing them at the end of March. They will be delivered at the end of the first week in April.

Most vegetable growers trained in the production of exotic vegetable have undertaken production as expected. They have however been challenged by a dry season without the usual intermittent rainfall. In some extreme cases, farmers have been forced to postpone planting until the rains come in May-June.

#### Peri-Urban agriculture gap analysis

In late March Dermot Cassidy, expatriate Peri-Urban Agriculture Specialist, arrived in Liberia. One of his first orders of business was to produce a gap analysis of the peri-urban agriculture value chain. Some of the critical gaps identified included:

- Limited knowledge of insects, plant diseases, fertilizers, pesticides, and fungicides
- Lack of capacity to access sub-surface water sources, distribute irrigation water, effectively dry vegetables, and produce vegetable seedlings

This assessment resulted in the recommended actions that follow:

- Research to better understand the agro-climatic context
- Identification of appropriate cultivars, fertilizers, pesticides, and fungicides adapted to local agro-climatic conditions
- Advice to input suppliers, MOA extension agents, NGOs, and farmers regarding appropriate inputs
- Training of local input and equipment suppliers in the production of vegetable seedlings, treadle pumps, tube wells, forced-air dryers, and cool storage units/practices
- Connecting of input and equipment suppliers to farmers through the promotion of vegetable seedlings, treadle pumps, tube wells, forced-air dryers, and cool storage units/practices
- Quality control of technologies introduced
- Connecting of input and equipment suppliers and farmers to sources of credit to be invested in production and purchase

#### Preparation for rainy season vegetable production

A work plan for rainy season vegetable production was developed and has begun to be implemented.

Activities include:

- Group selection criteria determination
- Consultation with informed sources for pre-selection of interested groups
- Pre-selection of groups
- Meetings with groups
- Final selection of 8 to 10 groups totaling 250 to 300 farmers
- Training in plot establishment, composting, planting, crop protection, etc.
- Connection of farmers to input and equipment suppliers

Implementation of these activities began in March and will continue until September 2012.

#### **Outcome of our activities we achieved the following:**

153 farmers trained through approximately half of the vegetable production cycle

3 metal workers trained to manufacture treadle pumps

#### **These outstanding activities will be completed in next quarter of the program**

As described above, all of the PUA staff was not hired until the end of the quarter. This has delayed implementation of the main project activities undertaken thus far. Hiring of this staff at the beginning of the quarter ending December 31, 2011 for example would have made possible completion of the dry season training in high value vegetable production and the sale of greater numbers of treadle pumps. Instead, the dry season training will not be completed until May or June and the first treadle pump sales will not be achieved until April.

#### **Dry season vegetable garden farmers group**

No	Community	Group Name	Membership			Area cultivated (ha)
			Male	Female	Total	
1	Coco cola Factory	Coco cola Factory com. Mixed	4	32	36	0.3
2	Mount Barclay	year	5	15	20	0.08
3	Division 31 firestone	Alakpoquoi	8	12	20	0.04
4	Zayzay Community	Swamp & Upland Group	8	8	16	0.2
5	72 <sup>nd</sup> community	Center for Urban Gardening	3	7	10	0.2
6	Nyeankodee	Teekelalai	15	1	16	0.04
7	Zuba Town		13	22	35	0.2
	<b>Total</b>		<b>56</b>	<b>97</b>	<b>153</b>	<b>0.86</b>

**Quantity and variety of vegetable seeds distributed for the dry season vegetable garden**

NO	COMMUNITIES	VEGETABLE SEED			
		CAYENNUE PEPPER 50GRMS/packs	UNION 100GRMS/can	WATER MELON 100 GRMS/can	OKRA 100 GRMS/can
1	Coca cola Factory	6	8	19	20
2	Zayzay Comm.	3	4	9	10
3	Mount Barclay	4	5	11	12
4	72 <sup>nd</sup> Comm.	3	3	5	7
5	Zubah Town	6	8	18	19
6	Division 31 Firestone	4	5	11	12
7	Nyehn Todee	3	4	9	9
	<b>Total</b>	<b>29</b>	<b>37</b>	<b>82</b>	<b>89</b>

## INPUT SUPPLY SYSTEM INTERVENTIONS

### *Achievement*

#### ***Task 1.3: Input supply system interventions***

The LTTA/Team Leader Input Supply joined the FED Team on February 25, 2012.

During the months of February and March 2012 Agro-input dealers were identified in Monrovia and a rapid assessment of their activities, coverage and efficiency was carried out. Weaknesses and strengths were analyzed as opportunities and threats.

The results of these analyses will be used in Q3 and Q4 for capacity building activities in favor of Agro-input dealers to be implemented by both the FED Teams and STTA in the Input Supply component of the program.

During the same time period, projects undertaken by farmers associations were identified and resulted in the selection of 10 sites in Lofa County for demonstrations on ISFM, UDP and evaluation of farm inputs demand based on the acreage cultivated and observed soil fertility problems (iron toxicity, nitrogen deficiency and damage caused by insect pests and diseases).

#### ***Activity 1.3a: Improving Access to quality agro-inputs;***

- Rapid assessment of agro-input dealers in Monrovia: WIENCO, MIAGRO, GREEN FIELD, GRO-GREEN to review farm input imports, distribution and use, and potential capacity building areas;
- Meeting with MoA official at Bong, Nimba, Lofa and Margibi Counties to review activities, achievements and challenges associated with agro-inputs supply, distribution, use and crop yield improvement. The Customs and Duties Officials were also met to overview regulations associated with agro-inputs importation into Liberia;
- Field visits at Margibi, Bong, Lofa and Nimba to meet with farmers and monitor swamp rehabilitation operations, certified seed production activities and farmers training opportunities with training and research/outreach institutions to evaluate the potential for the production of extension materials and to discuss ways to upgrade curriculum for extension training.

#### ***Activity 1.3b: Testing and Introduction of new technologies;***

- Development of IFDC-STTA SOW. The final proposal will be submitted in mid April 2012, for review and approval to the FED/COP for submission to USAID.

### *Achievements:*

- Four Counties visited;
- SOW of IFDC STTA developed and IFDC budget revised and submitted to HQ for approval;

- Ten sites identified and about 50 hectares of swamp land evaluated for ISFM and UDP demonstrations involving capacity building for 500 farmers in Lofa County.

The following activities will be carried out to make a quick assessment of Agro-inputs demand. They involve:

- Site selection and evaluation in Bong County;
- Site selection and evaluation in Nimba County;
- Site selection and evaluation in Grand Bassa County

## GOAT INTERVENTIONS

### *Achievement*

#### **Task 1.8      Goat Interventions**

During the Second Quarter 2012, we established FED Project on the revitalized Ministry of Agriculture (MOA) Livestock Working Group. The goal of the group, meeting monthly, will be to "Coordinate Development Efforts in the Livestock Sector". Membership is to include all of the major donors and implementing agencies, NGOs, Projects, together with Private Sector operators, etc., current or planned to have activities in the Livestock Sector.

Working off of initial contacts made in the MOA Livestock Working Group, FED began individual reviews of projects in progress in order to capture any lessons learned as well as accomplishments in these programs. We carried out initial follow-up meetings with Private Sector actors such as Liberian Butchers & Traders Union Association, Liberian Cattle Union Association, AGRO-VET Inc., CARE, Concern World Wide, Human Development Foundation (HDF- local NGO). These initial contacts have resulted in solid working relationships established between the FED Project and other programs in the sub-sector.

Within the course of his work, FED Expert, Dennis has reviewed progress and issues surrounding the IFAD funded Agriculture Sector Revitalization Program (ASRP), implemented since 2006 and now in its final year of operation. This Program has focused on major national livestock restocking efforts targeting small farmers who lost their livelihood assets during the war years. Dennis is currently in the process of analyzing problem areas experienced in the restocking programs which have resulted in high mortality rates and reluctance of the sub-sector actors to engage.

During this quarter, FED has established professional contact with the USDA Land O' Lakes personnel in country and organized initial coordination meeting with the MOA regarding initial planning and coordination of both FED strategy and LOL Strategy in the sector. LOL and FED participated in these meetings together in order to convey partnership in the subsector of these two major USG funded programs. Initial discussions surrounded initial workplan drafts and resulted in the decision to carry out joint field trips next week to review on the ground assumptions made in initial planning.

Dennis B. McCarthy, PhD, a STTA for Goat Value Chain has now begun his initial assessment of requirements of upgrading the Central Veterinary Laboratory in order to make it a truly national scope disease surveillance facility.

Upon review of the Central Veterinary Laboratory and its day to day functioning it has become clear that both equipment and personnel training are required at the facility. Animal disease diagnostic and surveillance capacity is minimal. The National laboratory currently focuses on diagnoses of individual cases submitted by County Livestock Agents. A National Animal Health Laboratory facility should be traditionally more focused/concerned with surveillance of potential epidemic animal disease threats on a national level rather than incidental diagnosis of common routine animal diseases, i.e. intestinal parasites, etc., routinely encountered by producers. It should be focused on the detection and monitoring of "reportable" diseases such as Foot & Mouth Disease (FMD), Peste des Petits Ruminants (PPR) and Pleuropneumonia among others with a national/regional animal disease threat perspective. The Food and Enterprise Development (FED) Program has initiated contacts with various Veterinarian



Diagnosticians who have worked with the Laboratory in the past and a thorough review of the needs for both training and equipment is underway. Following these reviews, a strategy to upgrade the facility will be finalized and implemented.

FED has organized a strategic team approach to on site field assessments of both past and present development efforts in the livestock sector as well as current Ministry of Agriculture (MOA) National capacities to support the livestock sector in the field. The Livestock Sector Assessment Team, consisting of National Headquarters Staff at both the National, Regional, and County levels, as well as USDA, LOL and FED experts has been mobilized to take part in a series of joint field assessments aimed at ground truthing previous perceived needs and gaps. A comprehensive list of critical field sites around the country to be assessed jointly by the team has been finalized and field site visits begun. Initial field trip assessment of Montserrado County was completed in March with Nimba, Bomi and Lofa counties programmed to be completed in April.

A strategic partnership with a successful restocking program in the north and west of the country, under the guidance of Samaritan's Purse, has been forged. Initial field reviews of the Lofa County, Foya District, activities under these programs (begun in 2006) are providing solid, ground truthed, examples of highly effective approaches to practical restocking practices. These examples will be adapted to the new intervention areas and efforts under the FED Program.

## RICE VALUE CHAIN

### *Achievement*

#### *Rice Sector Gap Assessment*

During this quarter, Dr. Eric Wailes, STTA for the Rice Value Chain met with stakeholders including government, importers, farmers, NGOs and other donor-supported projects and during those meetings he met with Dr. Robert Chakanda, International Seed Expert Food Security Coordinator, FAO and held several discussions on the best way CARI as an institution has been carrying on the production seed. Dr. Chakanda recently left his post at CARI where he worked on their production of foundation seed. Currently, CARI seed production is being managed by Mr. Eric S. Tokpah. He is assisted by Emma Jao and Agnes Kwalo on lowland rice varieties and Kollie on upland varieties. There is also a group of Chinese rice scientists working on hybrid rice at the CARI station.

Dr. Chakanda indicated that a major effort on lowland varieties was on WITA 4 a variety imported from Ivory Coast. This variety is particularly iron tolerant and matures in 110 days. For a full list of both lowland and upland varieties is being produced at CARI.

The current system is that foundation seed was produced in 2010 at CARI and on three major private farms in 2011. The production of pre-certified seed will be produced in 2012 by 5 to 7 farmer groups and Dr. Chakanda will be the chair of a working group session the "Seed Policy Workshop" focusing on seed production, examining the regulations with respect to breeding, foundation, and certified seed production. Other sessions will focus on administration and institutions, quality control and seed certification, and seed marketing.

Eric Wailes, STTA also met Mr. Stephen M. Zaizay, Senior Price Analyst and Steve Flahn Paye, Director of Price Analysis and Markets of the Department of Price Analysis and Marketing, Ministry of Commerce and Industry. Their discussions were centered around in knowing percentage of imported rice on the Liberian markets and which data from the Ministry will be useful to FED. Mr. Zaizay provided a data that shows a dramatic declined in the Chinese imported rice for the period 2006 through 2011. What appears to be the case is that imports from China (butter rice (medium grain)) while dominant up through 2010 have now declined dramatically and been replaced by parboiled rice and regular long grain rice from Thailand, Vietnam, Pakistan, United States, Brazil and Uruguay. He responded not at all when he asked if consumers are missing the butter rice imports based on the fact there are more imported rice on the market.

Eric Wailes, STTA, met with Deputy Minister Dr. Sizi Z. Subah, Deputy Minister of Technical Services, Ministry of Agriculture and Deputy Minister Dr. Moses M. Zinnah, Deputy Minister for Planning & Development.

During the quarter, Eric Wailes, STTA, attended program for Stakeholders' Validation Workshop for "Liberia National Seed Policy and Regulatory Framework". Presenters and topics presented at the workshop were:

1. Presentation by Paul S. Amaza (Nigeria) of consultant report titled "Liberia National Seed Policy". Report includes a description of Liberia's seed systems value chains.
  - a. Traditional and informal system operating at village and community level based on use of retained seeds. Includes trade primarily among farmers.
  - b. Semi-formal seed supply system involving production of improved seed and supply mechanisms that are local market based. Involves public, private, and NGO agencies.
  - c. Emerging commercial integrated seed supply system relies upon controlled varietal development, release of foundation seed to seed producers who practice controlled protocols for seed purity, certification, and marketing through own or distributors in variety of market mechanisms including direct marketing, local markets, and on-line markets.

*Stakeholders were identified and include*

- a) Private sector: Green Star, CHAP, Arjay Farms, Green Farm
- b) Public sector: African Rice, IRRI, IITA, Central Agricultural Research Institute (CARI), MOA, WFP.
- c) NGOs: BRAC, CRS, AGRA
- d) Donors: AFDB, SIDA, GTZ, USAID

Advantages and disadvantages of locally adopted varieties were discussed. Key constraints were identified and opportunities for the seed value chain were presented.

2. Presentation by Roland F Dahn, Legal Specialist on a Regulatory Framework for Liberia National Seed Production and Marketing. This framework became the core of the workshop which entailed breaking up the workshop into four discussion groups: a) Administration and Institutions, b) Seed production and quality control, c) Seed certification, and d) Seed marketing.

Each group took the framework presented by Mr. Dahn and addressed the framework from a Liberian perspective. The framework was redrafted and will be circulated for comments and further revisions before submitting it for introduction as legislation to the Liberian Congress. The draft was provided by the MOA and co-authored by Amaza and Dahn.

I participated in session c) Seed certification group included Ed Perry, FED Agribusiness Specialist, Director of Extension/DRDRE/MOA and Ronald J.M. Mugambe, Irrigation & Rural Infrastructure Specialist, Agriculture Sector Rehabilitation Project, MOA and Edwin Nimley, Professor of Agricultural Economics and Rural Development at University of Liberia

On March 9, 2012, Eric Wailes, STTA, met with Ms. Mariah Quaye, at Price Statistics Section, Liberia Institute of Statistics and Geo-Information Services (LISGIS). Mariah is in charge of collecting price data from the field statisticians on a variety of market prices. She provided an example of the Summary of Price Monitoring data sheets received Jan-Jun 2012 which lists county, period of reporting (bi-monthly at best) and focal persons. This work has been contracted by UN/World Food Program. The rice prices collected by LISGIS are used to support the monthly publication *Liberia Market Price Monitor*.

WFP has funded the price collection for key commodities by LISGIS (see Annex L for recent months by market). It is used, in part, for the monthly price analysis of food and other essential commodities published as *LIBERIA MARKET PRICE MONITOR* (<http://www.wfp.org/content/liberia-market-price-monitor-2011>).

Jonathan Greenham-COP, Jean Nyemba and I traveled to the Central Agricultural Research Institute (CARI) in Bong County.

We met with Eric Tokpah, who manages the rice program. He is trained in seed technology and his current program includes varietal trials of national and West African origin (African Rice Center in Benin). A large share of the effort however is devoted to foundation seed production (Nerica 19 and Suakoko 8). Foundation seed is being multiplied by several growers including Arjay Farm (Josephine Francis), Green Star (Subah) and growers in the Gbedin area. CARI sells its foundation seed for USD 1.25/kg. He indicated that he had 5 metric tons of foundation seed available for sale in 2012.



Tokpah, Greenham, and Rice Research Assistant with short stature Nerica varieties to the right.

There was no indication of any experimental trials being conducted over the past year and perhaps even over a longer period. It is clear that the rice program is understaffed. Eric indicated several future personnel are in training in Ghana including a M.S. degree rice breeder, another M.S. degree in seed technology and one B.Sc. in post-harvest technology. In addition to Eric, he has available three assistants with B.Sc. degrees including Emma, Agnes, and Kollie.

A mid-2008 Ministry of Agriculture “MOA” assessment reported the following:

*In early 2006, 10 NERICA varieties were introduced from the West Africa Rice Development Association (WARDA) along with 2 local varieties at CARI for evaluation. This evaluation exercise was intensified to include 34 additional NERICA lines. All the new varieties are now in preliminary screening trials while 5 of the earlier lines (NERICA 1, 4, 7, 8, and FK19), after two years of testing, have been advanced to on-station multiplication for production of foundation seed.*

*It was disclosed in a recent Quarterly Report that following multi-locational testing and on-farm evaluation of these materials, and the setting up of an official seed release procedure, these materials can be released to farmers by the Liberian Government.*

*A target has been set for the production of 50 tons of foundation seed at CARI in 2008. To this end, 12.5 hectares of upland and 3.4 hectares of lowland rice have already been planted at CARI. It is expected that 15 hectares of upland rice will be planted by the end of this season along with two cycles each of 3.4 hectares of lowland rice. Seed production from the two ecologies is expected to exceed the 50 tons targeted.*

Eric indicated that he was screening some conventional varieties (11 lowland and 7 upland) from Mali, acquired through AGRA. He promised to provide a report on the first year of yield trials. He indicated that the best varieties (DKA 1 and DKAM 4) produced 7.8 mt/ha paddy and an upland variety DKAP 17 produced 8.7 mt/ha. He is also screening 25 lines of ARC supplied super hybrids.

No fertilizer response studies are underway. The varieties will be tested for tolerance to iron toxicity which is a major yield constraint in Liberia.

Eric indicated that the major constraints were yield gaps largely a result of planting of mixed varietal seeds, untimely transplanting, application of fertilizers, pests (birds, rodents, etc) and harvest timing and technologies. Post harvest constraints include pests (rodents) and lack of clean drying and storage facilities. While there is a lack of experimental data, Eric indicated that upland variety yield gaps exist as a result of lack of access to fertilizers, presence of pests including ground hogs, birds, stem borers and stink bugs. Lack of access to pesticides such as Dursban is a problem. Regarding birds, apparently the Environmental Protection Agency has opposed the use of rice nets to control bird damage. Popular local country rice varieties include Suakoko 8, drought tolerant lowland rice but photo-period insensitive and LAC 23 (red).

We visited the varietal demonstration site for low-land varieties. Prominent tall stature varieties included Suakoko 8 and Nerica. There are a large number of short-stature varieties however with hand panicle harvesting, short-stature varieties as less desirable as they require significant stooping by the person harvesting. On the other hand, the tall varieties are extremely vulnerable to lodging. I have a series of photographs of this variety plot.

Adjacent to the main administrative offices is a compound built by the Chinese to implement mass production of Chinese hybrids in lowland areas. Not much is known of their plans but this could provide a significant impact on lowland rice production and value chain organization. The project needs to investigate further.

After leaving Suokoko, a short stop was made in Salala, Liberia to see and meet a machinery manufacturer who builds a small rice huller, called Freedom Mill. (See Annex N). This huller is very rudimentary but is used in small market towns to tow mill paddy rice for local country markets. The salesperson indicated that the cost was negotiable but the lowest estimate given to me was USD 1,400, which I suspect can be negotiated down.

We also visited Arjay Farm (Josephine Francis) on the return to Monrovia. Arjay Farm is a major seed supplier to farmers of “certified” seed. The farm sells at local markets in package sizes of 1, 5 and 25 kg. She is currently selling Nerica varieties 19, 14, 2 and 1. Arjay sells certified seed at USD 1.5/k g. She is preparing to produce a significant quantity of Suakoko 8 for 2012 and LAC 23 for upland seed. Arjay

farm has financial means to make investments not only in establishment of lowland production area but also in good quality stacked bin rice drying, cleaning and storage. (See Annex O for photos).

The farm has a total of 200 acres with 75-100 in lowland flood capacity. The farm has recently expanded its lowland production area by installing irrigation infrastructure at a cost of \$3000/hectare. Production costs are estimated to be \$300 - \$500 per acre. The farm used an irrigation engineer by the name of Yaya.

University of Liberia Tolbert College of Agriculture and Forestry Dean Roland Massaquoi and Professor Edwin Nimley drove me to the College of Agriculture and Forestry campus at Fendell. While there is a new set of buildings funded by China, the agriculture campus is being rehabilitated. It sits on an area of 5,000 acres. The campus is adjacent to the original WARDA headquarters which were gutted during the civil strife but basic structures remain and will be rehabilitated including the administrative offices for the College, dormitories, classrooms, laboratories, etc. The area is bisected by a significant body of water that drains local streams and was and will be used as a source of irrigation for the experimental fields.

Regarding the rice sector, Roland was the chief rice breeder at CARI for Liberia and liaison to WARDA from the late 1970s to early 1990s. The Liberian rice germplasm in the African Rice Center collection is based on selections and research by Dr. Massaquoi.

Roland believes that the future of the Liberian rice sector must focus on the lowland areas, which before the civil conflict included large delta production zones based on significant investment by the World Bank, German GZT and EU. Some of these sites remain but need significant rehabilitation including in Lofa (Foya, recently the Libyan concession but originally developed with Israeli assistance), in Bong (CARI, Patawee and Cuttington), in Nimba (Gbedin and Kpein), State Town, in Grand Cape Mount (Madina, recently the Novel concession) and others. I believe that Albert Bass has a good knowledge of these projects and should be consulted

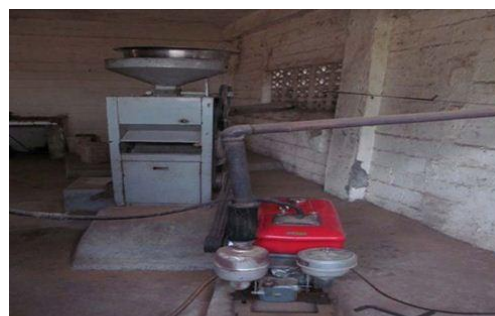
Roland believes that a major constraint to development of lowland rice areas is lack of land title. Investment costs to rehabilitate former and develop new lowland rice production areas of \$3000/ha will not be made unless there is either land title or if production can be organized through cooperative (tribal) groups such as what is being proposed for coffee and cocoa (see article by Daily Observer).

One other observation which is likely to impact the development of the rice value chain is the emerging importance of maize in the production and diets of Liberians. Roland indicated that a number of the returning émigrés have returned from countries where maize is a more important staple and that certainly in peri-urban farming, maize production is increasing at a dramatic pace. (See Annex P for photos).

I Traveled with Mary Miller and Jetty Carter to meet with Ethel Wione, leader of the Johnsonville Women's Cooperative in Mount Barclay. The cooperative is producing rice seed. They have access to 14.5 hectares of lowland swamp which they are trying to buy from the local government. Rice production was initiated in 2007/08. They have currently have cleared and have under cultivation 4.5 hectares divided into 104 plots. The initial production was funded by a grant from an ARD/Tasmoa project of USD 8,545. A share contract on the initial seed allowed for 80% of the revenue to return to the cooperative (USD 2,700). Total sales were USD 3,370 on output of 2.5 metric tons of seed rice for the 4.5 hectares. This is a very poor yield on lowland rice and production must improve for economic sustainability. Most of the labor comes from coop members, originally 40 members but now 25 after 5 years of operation. As all profits have been reinvested into production, 15 members left the cooperative due to lack of patience on getting any return for their participation. The cooperative also runs an orphanage currently raising 82 children. Ethel indicated that the older children help also in the rice production.

The cooperative is producing several rice seed varieties including Suakoko 8 (which has the highest tolerance to iron toxicity), Witta 4 and Nerica L 19. The major production problem for this farm is irrigation water management. During the wet season, excessive irrigation water submerges the rice and suppresses yields. (Note: IRRI has introduced varieties with a so-called S-gene that tolerates long periods of submergence. This may be a trait that Liberia might pursue for their lowland rice varieties given the lack of infrastructure to control rice flood irrigation.) They recognize the need for a head gate to manage inflow of irrigation water onto their fields. On inspection, plots also need improved leveling as even over short distances there is too much slope. They will benefit from an irrigation engineer, perhaps Mr. Yaya who worked with Josephine Francis. (See Annex R for photos).

We then traveled to Kakata to meet Mr. Fabio and visit the FABAR rice mill. His current mill is a Taiwanese single pass with rubber rollers. Purchase cost of this mill was USD 5,000. Rated capacity is 1 mt/hour but when in operation it is difficult to mill more than 500 kg/hour. The mill is powered by diesel. Belt replacement has been a major problem and Fabio has had the engine set up to use belts available in Liberia used for vehicles. Labor requirements include one person for paddy handling, two for mill operation, one for byproducts, and one for clean rice. In 2011, the milled produced 24 tons of milled rice and the objective for 2012 is 36 tons.



Fabrar Rice Mill, 1 ton/hour with hull aspirator (actual capacity 0.5 ton/hour)  
initial cost \$5,000.00

The operation is buying rice from 4 or 5 farmer groups of 15-20 farmers each. In at least one case they thought they were buying from a single farmer, who in fact was buying rice from his neighbors and reselling it with his own rice. The number of rice producer/suppliers overall has been increasing over the years. If farmers do not sell to them, the reasons are typically that production was only enough for the farmer's own use, or the farmer sold his excess rice locally. Ensuring a reliable supply of quality rice is an issue. The company does not supply inputs to the farmers.

Fabio is in the process of developing a major upgrade for his mill which will involve an investment cost of approximately USD 250,000. This would include a new mill with rated capacity of 1.3 mt/hour, a cleaner/sorter machine, a packaging machine and vehicles for procurement of paddy and shipping of clean rice to Monrovia for distribution to supermarkets.

FABAR rice is currently on the shelves of most supermarkets in Monrovia. It is priced at USD 2.20/kg. If we assume a 25% retail margin means he is selling wholesale at USD 1.65/kg. With a milling rate of 0.667, he needs approximately 1.5 kg paddy per kg of milled rice. Assuming a milling margin cost of USD 0.75/kg., his breakeven paddy buying price is approximately USD 0.6/kg paddy. Procurement of paddy at a price below USD 600/mt would imply profit. This analysis is clearly rough but suggests that the business must be reasonably profitable.

We returned to office and obtained rice import data provided by MOCI. We still need the monthly stocks reports by rice type.

I met with Mr. Armand Ballou and he provided a useful history of the rice trading companies in Liberia. Prior to 2006, two companies, K+K (Kadour&Kadour) and Bridgeway (John Bestman (occasional Finance Minister)) had the import licenses (import permit declarations (IPDs)) for rice. (See Annex T, Handbook for Operating Businesses in Liberia, MOCI, page 10 for special requirements for importation of rice)



With election of Sirleaf in 2006, the president wanted to open up rice trading and all licenses were cancelled. During a transition period IPDs were granted to two firms, Sinkor Trading (owned by Insurance company Mr. Browne) and Fouta Brothers (a Guinean company who controlled Liberian imports of Phillip Morris cigarettes).

## CUTTINGTON AGRICULTURE SHOW

### *Achievement*

In this quarter, FED was directly involved in supporting the 2012 Cuttington University Agricultural Show which was held in Suakoko in Bong County from 29 to 31 March 2012. A FED STTA was assigned mid-February to support Cuttington on the planning of the show, and also to determine and direct FED's contribution and investment in the show:

- **Planning for the show.** FED was a part of the show's Planning & Finance Committee and the Executive & Oversight Committee. In particular, FED worked with Cuttington to enhance coordination and reporting of the sub-committees, and liaised with other USAID and donor projects to improve coordination of support for the show.
- **Assistance to raise awareness, attract exhibitors and fund raise.** FED worked with Cuttington to identify and attract sponsorship from the corporate sector and provided some limited logistical support to facilitate the work of 2 non-Cuttington members of the trade and marketing committee. As a result, and compared to the 2011 show, the amount of funding and the number of funders for the 2012 show increased (in 2011, funding came from Cuttington, WFP, CARE and USAID and none from the private sector. In 2012, Cuttington was able to attract 6 new private sector sponsors to the show - totaling approximately US\$9000 - along with 6 institutional sponsors). FED also directly supported the trade and marketing committee to develop a media plan for 5 counties (Montserrado, Bong, Lofa, Nimba and Grand Bassa) involving 12 radio stations and 3 local newspapers. FED supported Cuttington to develop promotional materials, and provided funding and logistics for media outreach activities in the counties. As a result, there was a high level of public awareness about the show which bolstered the efforts of Cuttington to recruit farmer participants.



Agriculture Show Banner



A participating farmer awarded a certificate of participation

FED also directly participated in the show:

- **Showcase the impact use of ICT can have on improving agricultural productivity.** FED hosted a booth at the show to introduce the FED program to the public and to also showcase the use of information and communication technology (ICT) to improve agricultural productivity. The FED team prepared promotional materials for the show to explain the rationale and



USAID Liberia Mission Director

potential for using ICT in the agricultural sector. FED also set up 2 mobile devices to simulate how ICT can be used to assist extension work and increase flow of agricultural educational information to farmers and other stakeholders. More than 180 people came through the FED booth.

- **Support exhibitors to attend the show.** FED provided support to 6 organizations in the agri-equipment manufacturing, services and processing sector to attend the show.
- **Introduce students to survey methodology and use of mobile devices to collect data.** In collaboration with another USAID Program, EHED, FED used the agricultural show as an opportunity to expose students to data collection and to give them a first-hand opportunity of carrying out surveys using mobile devices. The FED M&E team spent the last few weeks of the month preparing an electronic farmer survey form which was then loaded onto hand-held devices. 10 students were selected by EHED from the College of Agriculture and Integrated Development Studies at Cuttington University. Those students were trained by a member of the FED team before beginning their survey of farmers at the show.



Cuttington University Ag Student  
conducting Baseline Survey at the Ag Show

## INFORMATION AND COMMUNICATION TECHNOLOGY

### *Task 2.4: ICTs in Agriculture Business Pilot Project Proposal and Activities*

#### *Achievement*

During this quarter, Gama Roberts, STTA for the use of Information and Communication Technologies in Stimulating Liberian Agri-Business sector had series of meetings ICT related stakeholders, Ministry of Agriculture (MoA) Media and Communications Department, GSM Companies and Community Radio Stations.

Along the value chains and throughout the FED project activities, the project aims to utilize ICT tools to increase productivity and profitability in the sector. We propose using radio as the core ICT tool, and either developing or strengthening business opportunities in the sector around this tool.

Unlike GSM mobile network coverage, radio broadcasts reach all over Liberia. While we can agree that a large percentage of the population, especially in the rural areas, have mobile phones, and although they may not have the funds to make calls and text, they do use their phones to not only receive calls but also to listen to radio broadcasts.

Radio is clearly is medium to provide information to the population in a country where a majority of the rural population cannot read and write and are also more comfortable listening to programming in their local dialects.

While the MoA has worked and currently does work with some stations to present agriculture segments in their programming, the working relationship with stations is limited to a few stations, and the working



arrangements with the station is not always consistent nor efficient. The agriculture segments produced could be better developed and could be sustained if the stations were better operating businesses. Suffice to say that hence the programs are not necessarily effective. A host of challenges exist including the following:

- Lack of proper equipment to conduct live outside broadcast consistently and at a low cost
- Lack of proper mechanisms to enable free flow of information/feedback from listeners
- Lack of manpower and logistics to visit the communities in the broadcast areas
- Lack of proper tools to record and store centrally information received from counties for easy access to those who need it
- Limited number of sponsors for such radio programs both private sector and public sector
- High turnover of radio and MoA staff
- No strong financial and managerial capacity

**Pilot Project Concept:** In the next five years, it is envisioned that the FED project will have one (if not more) station operating efficiently and in a sustainable manner in each of the six project counties, producing and airing innovative agricultural content for listeners in their respective dialects, and aiding to spur business opportunities for the station and well as for those who choose to utilize the medium, be it primary actors such as produce buyers and sellers, input suppliers, and transport providers, as well as other secondary beneficiaries such as transport providers and telecommunications/internet service providers (ISPs).

To begin, we aim to pilot the proposed approach in one county with one station selected based on criteria, train key staff at that station along with selected MoA extension personnel in that county as well as selected students in agriculture extension programs in the counties. We intend to monitor and evaluate results of the proposed approach over a period of time, resolve any challenges and adjust program approach to be more effective, and finally, move to the remaining five counties. We note that every county may be different and hence, timing to have programs running in a particular place may be different for each county.

Bong County – Gbarnga is the capital city and commercial capital of Bong County. The county is strategically located in the middle of the country and borders Lofa, Nimba, Margibi, Grand Bassa, and Gbarpolu Counties. Radio broadcast from Gbarnga can actually be heard as far some of these other counties making it possible to easily do simulcast if need be.

In Gbarnga, there are a number of radio stations we could begin working with. A number of the stations in the county have received support from partners over the years, but primarily in broadcast technology rather than in operating the stations as a business. We consulted a number of partners who have worked with the media in Liberia and have gotten a consistent assessment of the stations across the country and specifically across this county. ***Super Bongese*** seems to be a very vibrant station with the level of motivation to pilot such an ambitious program. The station currently has a staff of 24 led by Mr. James Dorbor Sao, the Station Manager. Among these 24 employees are 3 interns, 4 language producers, a number of program directors, news directors, sales directors, finance directors, a news editor, head of production, and senior reporter, and a number of other junior reports and presenters. The station's complete staff profile will be shared with us prior to activities.

The interns are usually high school or college level and receive a stipend of about 1500 LD monthly and usually serve a year term. Students usually compete for the internship spots which are funded from monies accrued from station income. The interns receive both in-house and on-the-job training. Other staffs also have some training, either from university programs or from programs offered by media partners operating in Liberia. All of the staff receives some salary or stipend with the highest level of payment being around 4000 LD per month. Some of the staff are also students at the local Cuttington College. Broadcast coverage extends from Bong County and can be heard in parts of Lofa, Nimba, Margibi, Gbarpolu and even in Grand Bassa. The station used to produce a program called “On the Farm” where they basically provided information to farmers. They also had a program where 15 minutes of air time was given for local businesses to advertise. However, these programs are not consistent and are not broadcast to a wider audience. From about 2007 to about November of last year, the station received quite a bit of support from organizations including FAO, CARI, Solidarites, CARE, and Mercy Corp, but all of the support from these programs have run out. Radio Super Bongese has a relationship with Lonestar in that the telecom provides electricity to the station via its cell site. According to the station Manager, no exclusivity agreements exist between Lonestar and the station.

### ***Activity 2.4a Radio Entrepreneurship Outreach***

**Pilot Radio Program:** Radio programs will be developed to air on Super Bongese building on what the MoA already does on ELBC radio in the capital city of Monrovia. The programs on ELBC produced by the Director of Communications at MoA, Hassan Kiawu, are 1 hour long programs aired live on Saturdays at 2:15 and then rebroadcast at 7:15 on the same day and throughout the other counties on other days of the week when MoA delivers the recorded shows to stations they have agreements with. These new programs will be 45 minutes to an hour long and have some elements from the show on ELBC. The shows will provide short segments on specific agriculture topics, but as well allow for farmers and others to call in to “toll free” numbers on the various mobile networks and ask specific questions and receive immediate feedback unlike previous programs.

This feedback could easily be “mapped” aiding the MoA to understand better the trends in the counties and plan their programs and interventions properly and in a timelier manner. Even more uniquely, the programs will have a “market on the air” segment whereby people can advertise their products or services and their contact details on the radio as well as incorporate market pricing from various markets even beyond the county, as opposed to simply from one large general market in the same county. Given this, the Ministry can now keep more accurate and real time trends of prices around the country and can maintain a database of prices for historical analysis that will be readily available. The intent is to broadcast these programs live, rather than pre-recorded, and also to possibly simulcast in other counties so that information is shared widely and in real time. Selected radio station presenters, correspondents, students in ag, and county and district agriculture extension officers, will be engaged in the process of presenting/hosting the shows and sharing information while in the field and will receive training and mentorship and can train across counties in order to reinforce what they learn. Persons from the communities in particular markets could also be relied upon to provide pricing information during the shows. We intend to map markets and market days in the counties and as much as possible, present the agriculture shows on those days and at those times which coincide with the market days.

Prior to these programs being aired, we intend to begin placing jingles on air to alert of the coming new shows so that people in the various communities are anticipating the show and so that we can get good participation over the period of the pilot.

**Spurring Business Opportunities:** The radio programs should encourage business opportunities in and around the sector. Being able to broadcast shows live will allow for real time marketing and selling of goods and services a wider area rather than just at specific physical market locations. This method in essence extends the market space. Besides just the marketers, the transport unions and input suppliers also have an opportunity to market their services to a larger population and could actually sponsor the stations/shows for advertising for them. Transport unions will now be aware of where transport needs exist and can utilize membership to respond to the increase in volume of need for transport services.

Input suppliers listening to call in shows call also assess where needs are the greatest for tools, pesticides, fertilizers, seeds, and other inputs and can be able to respond more quickly and there market can increase in this regard. Moreover, the volume of calls made to those who are marketing and advertising their goods and services on air, should increase and hence there should be an overall increase in volume of calls during those shows. This may not be a significant increase in revenues, but this in essence could also be an opportunity to convince the mobile providers as well to sponsor the shows and provide other support such as the “toll free” numbers mentioned above, for example.

Besides these business opportunities, we are looking to the agriculture extension officers and students becoming a sort of mobile service centers. Ag extension workers and students will be equipped with android tablet devices so that they will be able to collect the type of data the MoA needs from the field as well as allow them to show relevant educational videos to farmers and marketers on market days in particular markets as well as in communities farming communities they may visit on agriculture extension visits.

These mobile service centers can also serve as sales points for inputs such as pesticides, fertilizers, tools and the like. Hence these students and agriculture extension workers could possibly be entrepreneurs making money for themselves and in return providing information back to the MoA. We can employ a lease to own option which gives them the opportunity to lease to own the tools they need, be it mobile devices (tablets), motorcycles or vehicles. Hosting the radio programs or operating as mobile service centers can be incorporated into the curriculum of the agriculture students. At Cuttington College and/or possibly BWI, we could do this. To begin, we can simply conduct computer training courses for the selected group of students and county agriculture officers for the pilot. When all complementary tools are completely developed, we can also train them on those tools as well, but the basic computing skills are needed quickly.

**In developing a Resource Database:** Ag extension officers in the counties will collect data and share this data with back to national level. However, this process is inefficient and receipt of information is not timely. Furthermore, there is no central location to find data and analyze trends in order for the MoA to respond effectively or plan its programs and/or interventions properly. For example, there is no easily accessible database of all the markets and/or market days in each of the counties.

There is no central, easily assessable database of all farmer organizations in the counties, or one for all transport organizations in each county. To locate those who market seeds, tools, pesticides, fertilizers,

and other inputs, takes time. This information does exist, but it is not centrally located and not easy to access. As part of these project activities, we will look to develop a MoA web portal which will provide access to a database of all of this and other relevant type of information. Links to various agriculture related studies conducted by the MoA or LISGIS, for example, could be accessed via this proposed portal.

#### **Proposed Pilot Activities and Timelines:**

<b>Activity</b>	<b>Outcome</b>	<b>Responsibility</b>	<b>Timeline</b>
Obtain listing of radio stations in target counties and hold discussions with current media partners on feasibility of working with potential stations	Potential counties and stations identified	ICT Consultant	Jan
Meet with LISGIS to obtain listing of markets and market days in all project counties in order to carefully plan radio program days for wider audience and larger impact	County markets and market days mapped (and possibly on web site), vicinity to radio coverage areas determined, and radio program days determined.	ICT Consultant	Jan, Feb
Meet with select radio stations, county agriculture officers, students, farmers/farmer organizations, and transport union leadership to assess interest and capabilities	Selected radio station and listing of all its staff, listing of all agriculture extension officer(s) in the county, listing of all transport union leadership and county members, listing of farmers and/or farmer groups, and potential students identified and selected to participate in training and other pilot activities	ICT Consultant	Jan, Feb
Determine supporting consultant needs	All ToRs completed for supporting consultants	ICT Consultant, DAI HR	Jan
Research, meet or hold discussions with radio program developers in Liberia and/or internationally and assess desire to participate in project	Consultant hired to develop radio program module(s) in collaboration with ICT consultant, MoA County Agriculture Officers and radio station key staff.	ICT Consultant, DAI HR	Jan, Feb
Research, meet or hold discussions with media trainers in Liberia and/or internationally to assess desire to participate in project	Consultant hired to conduct training with MoA County Agriculture Officers and radio station key staff on developed radio program modules.	ICT Consultant, DAI HR	Jan, Feb

Research, meet or hold discussions with media content developers in Liberia and/or internationally to assess desire to participate in project	Consultant hired to develop jingles and ads introducing the new ag radio programming, and to develop short video clips which could be downloaded on proposed mobile devices to be used in ag extension training and field work.	ICT Consultant, DAI HR	Jan, Feb
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Activity	Outcome	Responsibility	Timeline
Research, meet or hold discussions with web developers in Liberia and/or internationally to assess desire to participate in project	Hire web developer to begin to develop database and web interface to host ag resources online as the MoA information portal as well as mobile application for collecting information from the field using selected mobile device(s)	ICT Consultant, DAI HR	Jan, Feb
Research and select mobile devices and computing devices for training and field activities	Mobile devices selected, purchased and delivered	ICT Consultant Web Developer	Jan, Feb
Training on how to utilize computers and mobile devices to research and collect information.	Selected radio station staff, students, and county ag extension officers trained to use computing equipment	ICT Consultant Web Developer	Feb, Mar
Training on how to present newly developed radio program	Cast of radio station staff, county ag extension officers, and students trained on how to present the new program, and radio show is on air	Radio program Consultant, ICT Consultant	Feb, Mar
Development of content for and training on how to utilize mobile devices and “information kit”	Selected radio station staff, students, and county ag extension officers trained to use mobile info tool kits	ICT Consultant Audio/Video Content Developer	Feb, Mar, April
Conduct financial management, business management, sales, business management, and ICTs in business training courses with identified station staff	Selected radio station staff, students, and county ag extension officers trained in business management skills and use of ICT tools to increase business opportunities	Curriculum Development Specialist, Enterprise Development Specialist, ICT Consultant	Mar, Apr

Proposed Project Partners and Roles: The following persons or organizations have been identified as potential facilitators of this project.

Position	Proposed Resource	Purpose
Radio Program Producer	Tamasin Ford	Develop the structure of the proposed radio programs and work with local radio program producers to contextualize the programs (e.g. local dialects)
Audio/video content developer	Zubin Cooper	Produce content for an “information kit” which can be shared by ag extension officers/students (mobile service centers) on mobile devices (tablets) in the field
Radio Presenter/Trainer/Mentor	Liberia Media Center/IREX/UNMIL Radio	Work with radio program producer to contextualize the programs (e.g. local dialects), and conduct training and mentorship for the new radio programming across all project counties
Web Developer	Curtis Jackson	To develop a MoA web portal for sharing information in the sector and to develop tools which interface with the site/databases.

Activities Reported for the Month of January: During the month of January, the following activities were accomplished:

- Held a number of conversations with MoA Communications Director
- Met DAI M&E staff and reviewed Baseline Study Draft and provided feedback
- Met with Curriculum Development Lead and shared concrete ideas on collaboration throughout the project, specifically as relates to how to integrate ICT and ICT tools into curriculum
- Met with LISGIS to secure market and market days listing
- Met with radio producers, video developers, web developers, and media partner organizations IREX and LMC, to consider working relationships.
- Visited two counties and met ag extension officers, students, farmers and farmer groups, as well as radio station staff
- Determine proper mobile device for pilot
- Selected county and radio station to conduct pilot.

## CROSS CUTTING ACTIVITIES

There are certain activities cut across all components of FED at a greater or lesser degree. These include environmental compliance, gender, and training.



## ENVIRONMENTAL COMPLIANCE

### *Achievements*

During the quarter, Boima Bafaie and Chloe Wardropper of our staff attended the regional USAID Environmental Compliance training conference in Ghana March 19-23. They received training on Regulation 216 for Implementing Partners.

Upon their return to Monrovia, an environmental training was held for FED project staff (county managers, extension workers, M&E officers, and vegetable and agricultural inputs team leaders) on April 2 and 3, organized by Patrick Hall of The Cadmus Group with Chloe Wardropper and Boima Bafaie of FED. The training provided 25 participants a basic understanding of USAID environmental procedures and FED's environmental compliance requirements, focusing on EMMP implementation. Small group exercises and field visits allowed participants to develop practical skills for environmental mitigation, monitoring and reporting specific to FED activities (e.g. fertilizer use, small-scale irrigation, and development of best management practices).

Patrick Hall, one of the facilitators at the just ended environmental compliance training in Monrovia advised on next steps for FED environmental compliance. The IEE and EMMP will be amended to reflect new additions to the FED project, including new farmer technologies such as more efficient vegetable dryers.

TAMIS, FED's internal reporting system, is under revision to incorporate environmental compliance into internal project funding requests and FED's Pesticide Evaluation Report and Safer Use Action Plan (PERSUAP) is under development, scheduled for initial completion in the week of April 9, 2012.

## TRAINING CONDUCTED

### *Achievements*

During the quarter, we trained a total of 288 people (89 men and 199 women) in the following subject areas:

- On Jan. 3-6, 2012, 80 participants (11 men and 69 women) from Welekamah Women Agricultural Group, from Gbarnga, Bong County attended an Enterprise Development Training Workshop (AGRICULTURE AS BUSINESS WORKSHOP) and they were trained in developing the concept of farming as a business, selling techniques, customer service determining production cost. The training was done by the Enterprise Development section;
- On February 8 – 10, 2012, 30 participants: (29 females and 1 male) from the Bonpain Women Group in Duompa Twon, Nimba County attended an Enterprise Development Training Workshop (AGRICULTURE AS BUSINESS WORKSHOP) and they were trained in developing the concept of farming as a business, selling techniques, customer service determining production cost. The training was done by the Enterprise Development section;



- 25 participants (20 FED Staff; 21 men, 4 women) trained in Reg. 216 requirements, and environmental sound design and management principles.
- 153 urban and peri-urban vegetable growers (56 male and 97 female) in and around Monrovia in the production of exotic vegetables. Four vegetables were chosen – onions, watermelons, Cayenne peppers, and okra. Farmers were trained in garden layout, planting, seedling production, soil amendments, irrigation, and the importance of weeding.

## COMPONENT TWO: STIMULATE PRIVATE ENTERPRISE

### *Private Sector Development*

During this quarter, the Private Sector Development and Vocational Education and Curriculum Sections of the Food and Enterprise Development program commenced the period with a workshop for an agricultural group in Gbarnga, Bong County call Welekamah. This group has a membership of 80 (69 females and 11 males). The workshop which was conducted by Mr. Bill Montgomery Jr. and Associated from January 4 to 6 was to introduce participants to formalized methods of commercializing farming in order to derive maximum financial benefits from their produce and labor. Mrs. Jetty Carter, FED Women in Business Officer; Mr. Nelson Kanneh, FED Communications Manager; and Mr. Albert N. Bass, FED Vocational Education Specialist represented the FED at the workshop.

The workshop was held at the newly renovated office complex at the premises of the Central Agricultural Research Institute (CARI) called (101 Building).

The workshop covered three Modules:

1. Module One – Concept of Farming as a business;
2. Module Two – Selling Techniques;
3. Module Three – Customer Service.

Topics thought under Module One were: 1. Defining business and its elements 2. Business growth cycle and facilitating farming as a business 3. Relating farming to business. Under Module Two: participants were introduced to various selling techniques: 1. Build rapport with customers; this will uncover the needs and wants of customers and whatever problems they may have. 2. Ask questions 3. Listen 4. Establish the value of the product 5. Sell the benefit not the product 6. Never rush the sale or the customer 7. Know the product and 8. Follow through with promises. Module Three focused on Customer Care. The details of this module involved: 1. The importance of customer care 2. What do customers want? 3. What it takes to care for your customers? 4. Dealing with customer complains. The workshop successfully ended with participants expressing themselves about the success and short coming of the workshop.

In February the Private Sector Development Department of FED worked with the Community Sustainable and Economic Empowerment Organization (COSEO) to complete the Enterprise Development Plan form. COSEO is a group that is predominantly women with a total membership of 25 people (20 women and 5 men).

There was a meeting held with the Executive Director and the accountant of the ODAFARA team and the way forward was discussed as well as their draft proposed activities for the development of 5.58 acres (2.232 hectares) of lowland in Duompa Township, Nimba County.

From February 8 – 10, a successful four day participatory Enterprise Development Training Workshop was held for the Bonpain's Women Group in Duompa, Nimba County. The workshop brought together farmers and gardeners planting a variety of crops, including rice, eddoes, plantains, cassava, potatoes, pepper, bitter ball, okra etc. The purpose of the workshop was to introduce participants to the enterprise aspect of transitioning from subsistence agriculture farming to commercializing methods of agriculture

farming into business, productivity, and to shift the focus from supply driven production to demand driven production. This process forms part of the USAID Feed the Future Initiative, where FED intends to assist the enterprise with technical assistance in order to overcome constraints and meet its objectives. The three modules covered during the workshop were: 1. Farming as a Business 2. Selling Techniques and 3. Customer Services.

There were 30 participants: (29 females and 1 male) from the Bonpain Women Group. The training went very well and the participants were excited about the new approach and thanked the facilitators for the training.

A one day field site follow up visit was made to the Welekamah Women Group in Gbarnga, Bong County and during our visit we realized that the group was involved in activities that were expected of them since we conducted the first enterprise development training workshop for them.

## **Task 2.1      *Enabling the Policy Environment for Private Sector Growth***

### *Achievement*

During the quarter, Malcom Toland, STTA for policy reform met with stakeholders including government, importers, farmers, NGOs and other donor-supported projects. Important was an up country trip to Bong and Nimba counties to learn about the extent of sector dialogue and the potential to address policy issues as part of this. He also learned about how feeder road improvement decisions are made by local actors and the extent to which Ministry of Finance and Ministry of Commerce officials target farmers and agricultural businesses for registration and taxation purposes. Malcolm is currently preparing his initial report about emerging policy issues and recommendations for which of these should be FED priorities and how FED can effectively engage in each.

He participated in meetings of several existing dialogue forums including for rice and cassava, also the Agriculture Coordinating committee led by MoA and a multi stakeholder workshop of non-state actors. Through his research he has identified an initial set of enabling environment barriers including:

- Customs, including levying of excessively high duty rates and bias against medicinal/pharmaceutical products used to treat animals
- Product quality/ fake products entering country
- Poor state of feeder roads
- Lack of food safety standards
- Access to land
- Lack of a national seed policy
- Investment incentives which are biased against livestock.

## **Task 2.2      Access to Finance**

### *Achievement*

During the quarter, Mary Miller, STTA and Jetty Smith-Carter conducted an Access to Finance study and the purpose of this study is 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, their potential to access credit. Based on these investigations, the target is to develop an action plan of steps that FED can undertake to increase the availability of finance.

In addition to reviewing other meeting notes and reports, the work in this study comprised interviews with banks and MFIs that are considered to have some interest in agricultural and agri-business finance, to determine their current status and activities, and to investigate potential for joint work. The study team also visited several project clients, including farmers, processors, and a farmer cooperative.

The banks and MFIs that are the most likely candidates for joint work in finance are:

Access Bank – commercial bank that operates as an MFI; is expanding into agricultural lending (part of a Nigeria-based multibank network; IFC is an investor)

Afriland Bank – commercial bank that is particularly focused on rural and agricultural finance, is already directly dealing with farmers and agribusinesses; has a workable model for developing local village savings and loan associations that could serve project smallholder clients, first VSLA to be active in July 2012 (part of multibank network started in Cameroon)

BRAC – Includes both an MFI with 30 branches in all counties where FED works which has already reached 24,000 micro clients and 1,000 small business clients, and an NGO that offers agricultural extension services

Other potential MFI partners are LEAD, Liberty Finance, and LEAP, although the latter two are in the process of restructuring. LEAD has experimented in agricultural lending, but in general the MFIs have made traditional microcredit loans, which call for weekly, bi-weekly, or monthly payments, and are not tied to agricultural cycles.

A major issue in Liberia is the attitude by borrowers of all sizes that loans are hand-outs and do not have to be repaid, apparently a legacy of post-war assistance. This behavior, as well as the generally weak condition of the economy, means that the banks and MFIs are dealing with large problem loan portfolios.

At present there generally seems to be little borrower bankability. This can be developed by increasing the profitability of borrowers, ensuring that they have operating experience, maintaining records of performance, and particularly have the willingness to repay loans.

In the short run FED can be building relationships with financial institutions by sharing information and inviting bankers to events, both to introduce the project and its clients, as well as to educate the bankers.

In the longer run FED can look to develop partnerships with financial institutions, as client needs emerge – e.g., support development of a branch office in an underserved area, partially fund expansion of an equipment leasing firm into the Liberian market.

The Recommendations from this report will be consolidated into a series of Action Steps for FED to follow.

## COMPONENT THREE: BUILD LOCAL HUMAN CAPACITY

### *Curriculum Development and Vocational Education*

A team from FED Monrovia Office comprising of the Vocational Education Specialist and Dr. Albert Algard, Curriculum Development Specialist visited BWI and had a meeting with Mr. Mulbah Jackollie, Principal and Mr. Jacob Swee, head of the agriculture department of BWI. Discussions were centered on:

- The progress of the office space for FED
- FED'S contribution to the office space
- The progress of the Curriculum Development Specialist's house
- The requirement for the new library

The Vocational Education Specialist and the Curriculum Development Specialist attended the Technical Vocational Education Training (TVET) Assessment committee meeting on BWI in the Anti-Doping Room of the Ministry of Youth & Sports, S.K.D. Sport Complex. The assessment team that visited BWI on January 6, 2012 reported that:

- That BWI needs training materials
- That the student population is increasing; the classrooms are overcrowded.
- That the curriculum of the institution needs upgrading
- That the students want the BWI radio station restored

A joint assessment team comprising the Ministry of Education, Ministry of Youth & Sports, the YES Program of the World Bank and FED were appointed to conduct a general assessment of BWI on January 12 & 13, 2012 and submit a report to the TVET Committee on March 1, 2012.

On January 12, 2012 the Vocational Education Specialist and the Curriculum Development Specialist joined the assessment team on BWI. At the meeting on BWI, the Team was divided into groups according to trade areas. FED was part of the agriculture group to assess the agriculture department. Members of the group were: MOE, BWI and FED. The Team visited the compost and piggery buildings, the department classrooms and their rubber nursery before settling in the office of the department's head, Mr. Jacob Swee, where he gave an overview of the department. The Team examined the curriculum and the list of the staffing. On January 13, 2012 the various teams met in the new library of BWI and submitted their reports to the Assistant Minister of Education for Vocational & Technical Education, Hon. Yonto B. Kesselly.

There was a meeting held with the USAID/Liberia Education Team Leader, Julia Richards. This meeting was very productive as we were able to get an overview of the USAID Education portfolio and to look at possible areas of collaboration and also complementing the FED activities. Another meeting was also held with the Minister of Education, Hon. Othello Gongar and his Senior Policy Advisor, Dr. Albert Coleman to discuss about the needs and plans for BWI. We also discussed the ongoing assessment of BWI. The Minister is planning on examining the programs at the vocational programs in Liberia and to see how relevant their programs are for the labor market. The Minister made it very clear that his Ministry is responsible for designing policies and guidelines for the establishment, management financing and supervision of the Technical and Vocational Education Programs of Liberia. The Education Reform Act of 2011 which was passed in August of 2011 fully spells out the Education Code. A Policy Manual and a Regulation Manual is currently being printed through the courtesy of USAID and this is all related to the 2011 Education Reform Act. He also reiterated his desire for the FED to participate in the assessment of BWI.

A team from the FED Monrovia Office, comprised of the Chief of Party (COP) and the Vocational Education Specialist, traveled to Lofa from February 1-3, 2012 to visit the Zorzor Rural Teacher Training Institute, during their visit they met with the Lofa County Agricultural Coordinator-MOA and Technology Center in Voinjama City, visited the office of Samaritan's Purse and the INTOFAWOR Multipurpose Cooperative Society in Foya.

At ZRTTI, the Team was greeted by Mr. Jerome Huaz, the Academic Dean, who informed the body that the Institution has an enrollment of 220 students. He also informed the COP that the institution has three fish ponds that needed some technical assistance because the fish presently harvested are very tiny. The COP promised to send a technician as soon as he can locate one to give technical advice.

On February 20, 2012 the COP and the Vocational Education Specialist visited the Principal of BWI, Mr. Mulbah Jackollie to discuss the way forward for the collaboration between BWI and FED. Mr. Jackollie welcomed the Team and stated that:

- 1,975 students have registered for the academic year but to date about 56 have not arrived
- Dr. Algard main attention was focused on
  - The Library
  - The agriculture curriculum
  - The office space
  - The security for his house
  - Running water for his house
  - Fan for the office
  - The generator for his house, etc.
- Mr. Jackollie said that
  - The generator house for the CDS is built
  - The master suite of the apartment is almost completed
  - The library is a priority for BWI
    - They want it equipped with IT services
    - They want more shelves built
    - They need up-to-date vocational text books
- The COP told Mr. Jackollie that
  - There is a group in the US willing to ship a container of vocational text books if the recipient institution is willing to pay the freight.
  - FED is willing to pay the freight if BWI is interested in getting the books; the principal will have to request for the books
- Mr. Jackollie told the COP that
  - BWI has a compost house that they want to commercialize the compost business at the same time conduct training for the community; they can train 25 to 30 farmers at a time.
  - BWI and Farm Builders have agreed for BWI to train some of their farmers on the campus and on the field.
  - Farm Builders has engaged a building on BWI campus to be used as a dwelling as well as an office.
  - The BWI authorities want compost management and farm mechanics to be included in the agricultural curriculum
  - They want immediate attention to be given to the improvement of their laboratory and library.

- They want the IT system to be link from the library to the office where the CDS will be to the laboratory building and to the agriculture department building.
- Chevron has provided funds to BWI to purchase two containers of industrial tools and equipment
- BWI needs 100 empty 50 kg bags and 21 gallons of gasoline to collect wasted vegetables from the general market in Monrovia for their compost production.
- The COP promised to make the funds available to BWI to commence their compost business.

On February 23, 2012 the Vocational Education Specialist visited the Grand Bassa Community College. The purpose of his visit was to acquaint him with the progress the College is making toward the establishment of the agriculture department of the College. Dr. Zangai, the President of the College, told the VES that they have a plan of action for the agriculture department of the College as follow:

1.

- Curriculum Development..... March 2011 to March 2012
- Recruitment of agriculture personnel ..... May 2012
- Review of curriculum with partners and Collaborators .....June 2012
- Lobby for collaboration and resources.....March 2012 to August 2012
- Commencement of classes .....September 2012
- Securing and development of lands .....September 2012

The VES told Dr. Zangai that the FED will work in close collaboration with GBCC, especially their agriculture department; the COP will ensure that a curriculum development specialist be sent to Buchanan to help with the development of their curriculum.

On February 24, 2012 The Vocational Education Specialist traveled to BWI to:

- Deliver the 100 empty bags and US\$89 for 20 gallons of gasoline to transport the compost from Monrovia.
- The Principal, Mr. Jackollie thanked the FED for the quick response.
- The VES delivered the 100 empty bags to Mr. William Barroll and traveled with him to Kakata City and purchased 20 gallons of gasoline to facilitate their travel to Monrovia. He gave Mr. Barroll the good note and brought the receipt to Monrovia for FED's Finance Department.
- Had a meeting with the administration of the Nimba Community College regarding the agriculture program.
  - The meeting was headed by Dr. James Thompson, Vice President of Academic Affairs of the college, as Dr. Yah Donleh Gonway-Gono, President of the College had traveled. Dr. Thompson told the VES that:
    - The agriculture department has opened with 60 students enrolled
    - Mr. J. Anandhavel Raja, an Indian, is the head of the department
    - The department has two instructors teaching general science.
  - The VES told Dr. Thompson that :
    - The FED foremost concern is to help develop the curriculum of the agriculture department of the College, appraise the internship programs, and develop a training plan and training of their staff.



- The FED would like to have a copy of their agriculture curriculum for review.

On March 19, 2012 The Vocational Education Specialist visited BWI to:

- Discuss issues related to the budget of the compost workshop to be conducted by the Agriculture Department of BWI
- Discuss the immediate plan of action of the BWI Agriculture Department
- Inquiry about the collection of the compost materials from Monrovia by BWI
- Mr. Jackollie informed the VES that they were having difficulty collecting the waste materials from Monrovia; however, Mr. Swee was still hopeful that they were going try to collect some waste material.
- It was agreed by BWI and FED that the workshop would be held as scheduled and that 30 participants from the communities within its environs of BWI would take part.

After analyzing the US\$1,305.00 budget for the Compost Awareness and Training Workshop of which BWI was asking FED to contribute the amount of US\$865.00, the FED's portion was reduced to US\$790.00. The VES asked Mr. Jackollie to redo the budget and e-mail it to him so that he would discuss same with the COP. The VES also asked the Principal to e-mail their plan of action for the Agriculture Department to him and the COP.

On March 22, 2012 the VES and a Team of four from the FED's office traveled to Kakata to assess the work at the FED's demonstration site and have a meeting with the Principal of BWI to discuss their proposed Compost Awareness Workshop. Visit to the Demonstration Site, the Kakata General Market and BWI:

- Workers were busy weeding and preparing the land for transplanting
- Messrs. Sneh Koffa and William Massaboi used the GPS to measure the Land area of the demonstration site
- Mr. Jean Nyemba interviewed the coordinator of the demonstration site and the District Agriculture Coordinator about the work at the site.
- Messrs. Koffa and Massaboi took the GPS at the Kakata City General Market
- From the Kakata General Market the Team went to the BWI campus where they Met with Mr. Jacob Swee, the head of the BWI Agriculture Department.
- Mr. Swee took the Team to the compost house where they saw compost in process.
- Mr. Swee reconfirmed that the compost awareness workshop would still be held as scheduled.

## MONITORING AND EVALUATION

### **Task 1.2      Data Collection, Baseline Studies, Impact Surveys, M&E**

#### *Achievement*

During the Second Quarter the M&E team developed and administered the FED Baseline Survey. The survey findings will help establish the current status of target beneficiaries in terms of agricultural and livestock practices from household heads in the program's primary and secondary counties. The survey focuses on four main topics: (1) Household Demographics, (2) Household Agricultural/Livestock Index, (3) Household Dwelling Characteristics, and (4) Enumerator Household Dwelling Observations. Data was collected using the KoboCollect platform on Android Mobile Device phones with each survey taking approximately 45 minutes to complete.

The same survey was utilized in both primary and secondary FED counties, but two separate sampling methods were employed. Within the four primary counties (Bong, Lofa, Nimba and Grand Bassa), a population based survey of households involving a two-Stage Cluster Sampling was applied. Districts were identified, villages clustered based on population density and access to primary and secondary roads using ArcGIS, villages were then randomly selected within the clusters. The number of surveys to be administered in each village was determined based upon household population size. Only villages with a household population density of at least thirty were included in the sample.

The team encountered several sampling issues for the primary counties in the field. This included randomly selected villages that could not be located on the available maps, villages that could not be located on the ground (despite being marked on the maps), and inaccurate reporting of household population size. Led by the M&E Specialist, the team developed and implemented sample replacement and adjustment strategies to ensure the total number of villages and interviews for the baseline survey were met and that the number of interviews completed in each village accurately reflected the actual household population size on the ground.

The M&E team coordinated with the Peri-Urban Specialist and FED extensions officers to develop the sampling for respondents within the FED Program's secondary counties (Montserrado and Margibi). The Peri-Urban team identified communities and individuals within the secondary counties who are receiving training from the FED program. The M&E team then randomly selected individuals trained to be interviewed as part of the baseline sample. Originally a target of fifty respondents from each county was established but due to inconsistent program participation and limited number of trainees this target is no longer attainable in Margibi. Instead, all those individuals trained who remain within in the program will be interviewed.

#### **Activity 1,2b. Baseline Surveys, Impact Surveys and Special Studies.**

Nineteen potential enumerators (13 men and 6 women) were identified and attended the FED Baseline Survey Training on February 6 – 9, 2012 led by the FED M&E team in Monrovia, Montserrado. The training introduced the enumerators to the FED Program and the purpose and design of the FED Baseline Survey. Enumerators were trained on survey methodology, techniques and best practices, as well as how to use the Kobo Collect survey platform on Android Mobile Devices to collect data and GPS readings in the field. A pilot test of the survey was carried out on February 9, 2012 in Brewersville, Montserrado. On

completion of the training and pilot, the baseline survey was revised and the FED Baseline Survey Team was finalized, selecting seventeen of the nineteen enumerators train (12 men and 5 women). The team consisted of the following members:

#### FED/DAI Staff Team Members

- M&E Specialist: Seongeun Chun
- Mobile Data Collection Advisor: Jacelyn Carlsen
- Special Studies Team Leader/Grand Bassa Monitor: Casey McHugh
- William Massaboi/Nimba Monitor: M&E Officer
- Nelson Kanneh/Bong Field Monitor: Communications Manager

#### Non FED/DAI Team Members

- 1 Lofa Field Monitor
- 4 Lead Enumerators
- 12 Enumerators

On February 10, 2012 the M&E Team and seven enumerators began a limited launch of the baseline survey in Coco Cola Factory, Montserrado County. The survey then launched in the primary counties on February 13<sup>th</sup> with the M&E Team and seventeen selected individuals from the training (1 Field Monitor, 4 Lead enumerators, and 12 enumerators). The team commenced the data collection in Bong County, basing in Gbarnga to work in Jorquelleah and other surrounding districts on February 13 and 14<sup>th</sup>, 2012. The team then moved to Nimba County, basing out of Ganta for February 15<sup>th</sup> and 16<sup>th</sup> to work in Sanniquelle-Mahn and surrounding districts. On February 17<sup>th</sup>, after four days of data collection, team meetings and debriefings, the team split into four smaller teams enabling data collection in each of the four primary counties to take place concurrently.



**FED's Enumerators Austin O. Kolleh and Aagon A. Dahn trying to cross a river to their next survey location on the 28th of February 2012, Yarpea-Mahn District, Nimba. Co.**

Teams consisted of three enumerators, one lead enumerator, and one DAI staff monitor. Each enumerator completed about four interviews per day. The number of total interviews conducted in each village varied according to the total household population. Lead enumerators and field monitors provided data collection quality checks and ensured that the numbers of target interviews for each village were interviewed. The monitors supervised team performance through surprise visits and observations. Data was retrieved from the mobile devices on a daily basis, uploaded and shared via email with the M&E team and Mobile Phone Specialist to verify all reported interviews were completed and data correctly stored on the devices.

In addition to the survey, Enumerator Interviewee Logs and Enumerator Village Trackers were also completed. The Interviewee Log provided a paper backup of respondents' demographic information. The log served as a means for monitors to ensure the target number of interviews was completed in each

village each day as well as quick reference for tracking enumerators' performance (i.e. number of interviews completed daily, length of time to complete interviews, etc.) The log also provides a source to crosscheck and verify geographic and demographic data collected on the mobiles devices against when cleaning the dataset. The Enumerator Village Tracker documented additional information on the villages visited including a GPS reading of where the enumerators exit from the main road on their way to the village; a GPS reading of the center of each village, a recording of the amount of time it takes to reach the main road in minutes from the center of the village on motorbike, the condition of the road, and other comments.

On initial completion of data collection in the primary counties, the M&E team coordinated with FED's agricultural extensions officers to identify and mobilize randomly selected trainees to be interviewed in the secondary counties in Margibi and Montserrado. Interviews were conducted in Margibi and Montserrado on February 12, 2012 and Montserrado on February 13<sup>th</sup>. Following the completion of initial data collection across the six counties, outstanding villages and respondents were identified and final cleanup and data collection continues. Final data collection on cleanup for outstanding villages and individual interviews in Margibi and Montserrado should be completed by April 6<sup>th</sup>.

Data entry for almost all surveys administered to date was immediate through the use of the KoboCollect platform and Android devices. The only time this did not occur was when there was an issue with the mobile device like the battery running out of current. When this occurred, the survey was completed using a paper backup form and then later input into the mobile device. Data entry from Interview Logs and Village Visited Lists on all surveys administered to date has been completed. The M&E team is now in the processing of cleaning and analyzing the data.

#### *Agricultural Show*

The M&E team provided support in developing and demonstrating how to use the Kobo Collect Platform on Android Mobile Devices as a data collection tool at this year's Cuttington University Agriculture Show. This included developing a short survey to be administered to farmers attending the show as well as an example of a form for agricultural extension officers to collect data from the field.

#### *Capacity Building ASRP Survey*

The M&E team provided support on an agricultural study being led by Joseph Saysay, a former President's Young Professional currently pursuing MSc. in Agricultural Economics and Management at Huazhong Agricultural University in Wuhan, China. Mr. Saysay is conducting a research project on the effects of aid on smallholder farmers' household staple food crops (rice and cassava) production, income and consumption in poverty stricken regions of Liberia. The team has worked with Mr. Saysay in developing his research plan, logistics, financial reporting and budgeting.

During this Quarter, 890 FED baseline surveys were collected in the FED focus counties, 849 Interviews were conducted across the four primary counties (Bong, Grand Bassa, Lofa, and Nimba) and 41 interviews were conducted in the secondary counties of Margibi and Montserrado.

<b>County</b>	<b>Districts</b>	<b>Villages</b>	<b>Completed Interviews</b>
Bong	9	48	216
Grand Bassa	8	34	152
Lofa	5	33	160
Nimba	14	64	321

Margibi	1	1	7
Monteserrado	2	4	34
<b>TOTAL</b>	<b>39</b>	<b>184</b>	<b>890</b>

COUNTY	DISTRICT	VILLAGES/ COMMUNITIES	# Surveys Completed
BONG	Fuamah	5	21
	Jorquelleh	10	54
	Kpaai	4	17
	Panta	2	11
	Sanoyeah	4	20
	Suakoko	4	22
	Yeallequelleh	8	27
	Salala	6	30
	Zota	3	14
<b>BONG TOTAL</b>		<b>46</b>	<b>216</b>
GRAND BASSA	Commonwealth	5	23
	District #1	4	16
	District #2	4	17
	District #3	7	31
	District #4	5	21
	Neekreen	5	23
	Owensgrove	2	9
	St. John River City	2	12
<b>GRAND BASSA TOTAL</b>		<b>34</b>	<b>152</b>
LOFA	Foya	10	50
	Kolahun	8	42
	Salayea	3	17
	Voinjama	6	25
	Zorzor	6	26
<b>LOFA TOTAL</b>		<b>33</b>	<b>160</b>
NIMBA	Boe & Quila	3	14
	Buu-Yao	7	33
	Doe	5	30
	Garr-Bain	9	43
	Gbehlay-Geh	5	21
	Leewehpea-Mahn	4	18
	Meinpea-Mahn	4	16
	Sanniquele-Mahn	4	16
	Twan River	5	26
	Wee-Gbehyl-Mahn	5	29
	Yarmeim	3	15
	Yarpea Mahn	3	16

	Yarwein Mehnsonnoh	3	19
	Zoe-Gbao	4	25
<b>NIMBA TOTAL</b>		<b>64</b>	<b>321</b>
<b>TOTAL FOR PRIMARY COUNTIES</b>		<b>177</b>	<b>849</b>
MARGIBI	Firestone	1	7
<b>MARGIBI TOTAL</b>		<b>1</b>	<b>7</b>
MONTSERRADO	Greater Monrovia	3	22
	Todee	1	12
<b>MONTSERRADO TOTAL</b>		<b>4</b>	<b>34</b>
<b>TOTAL FOR SECONDARY COUNTIES</b>		<b>5</b>	<b>41</b>
<b>TOTAL FOR FED COUNTIES</b>		<b>182</b>	<b>890</b>

The final cleanup for data collection on the baseline survey will be completed by April 6, 2012 and includes ten outstanding interviews in one community in Nimba, thirteen outstanding interviews in one community in Margibi, and 17 outstanding interviews in four communities in Montserrado. Data analysis and reporting remains outstanding.

Staffing within the Monitoring and Evaluation Department at FED continues to be a challenge. Candidates experienced in monitoring and evaluation, with reasonably strong computer skills, are difficult to find in Liberia. During the quarter, interviews of candidates continued for one key M&E position in Monrovia and the four field office M&E positions. Two candidates were offered and accepted positions at FED starting on April 2nd; one for the M&E position in Monrovia and the other for the Bong field office M&E position. FED will continue to advertise, solicit CVs and interview for the three remaining field office positions.

Development of the FED M&E system continued during the quarter with most of tools being finalized and uploaded onto TAMIS. Comprehensive training for all staff on M&E tools will begin in the coming quarter and additional testing and tweaking of the system will occur as staff begins to collect project data on the TAMIS system.

The project PMP was redrafted and re-submitted this quarter with input from LMEP. Other engagement with LMEP included a thorough update on FED progress in the area of M&E. As a result, LMEP staff attended a day of baseline data collection in Montserrado to see the process. In addition, a meeting was held with the MoA M&E Director, FED staff and LMEP staff to discuss PROMe, the data collection portal being piloted by the MoA and PIDS, the data collection portal that LMEP oversees. The meeting proved fruitful and both parties will hopefully be able to align their efforts, instead of creating competing websites, for donors using the best technology.

GIS support and training was obtained for FED's GIS officer. Four days of intensive one-on-one training was provided by LISGIS staff to enhance the skillset and understanding of GIS related issues on the FED project.

## PROJECT MANAGEMENT AND ADMINISTRATION

### *Administration and logistics*

#### *Achievements*

During the quarter, we continued to provide effective administration and logistical support to both the program and staff, while assuring contract compliance. Highlights for the quarter include:

Highlights for the quarter include:

- **Staffing:** Following USAID approval, we hired 12 new staff and as follow:
  - County Managers: 3
  - M&E Officers: 2
  - M&E Coordinator: 1
  - Administrative Assistants – Field Offices: 3
  - Office/HR Assistant: 1
  - IT System Specialist: 1
  - Cleaner/Caretaker: 1
- **Ongoing:** Recruitment is ongoing for the following positions:
  - M&E Coordinator/Officer – County Offices
  - County Manager- Nimba County
- **Logistic:** The following equipment were purchased and received:
  - We received IT equipment in February, 2012 from HQ;
  - We purchased 24 units of HONDA motorcycles and received 10 units, thus far. The balance 14 will be delivered later;
  - The Field offices are up and running, but need other support, including IT.
- **Quarterly Travels:** During the quarter we prepared and submitted a Quarterly Travel Plan for all STTA and to date we have received following STTAs in the table below.

#### *List of Staff/Consultants In/Out of Liberia January 1 – March 31, 2012*

NAME	DATE IN	DATE OUT
	LIBERIA	LIBERIA
Rebecca Sewall	26-Feb	9-Mar
Sudharshini Dharmawardane	19-Feb	29-Feb
Dr. Albert Agard	8-Jan	5-Feb
Gama Roberts	18-Jan	30-Jan
Lassane Zongo	11-Jan	15-Feb
Gwendolyn Ann Appel	29-Jan	10-Feb
Cecile Hipos	8-Feb	7-Mar
Jaclyn Carlsen	29-Jan	17-Feb
Malcolm Toland	12-Feb	26-Feb
Kathleen Kurz	7-Feb	17-Feb

Erika Dunmire	19-Feb	28-Mar
Dr. Eric Wailes	4-Mar	18-Mar
Jean Nyemba	25-Feb	10-Mar
Dennis McCarthy	17-Feb	17-Apr
Charles Weschler	15-Mar	11-Apr
Mary Miller	14-Mar	28-Mar
Zan Northrip	18-Mar	23-Mar
Alia Afshar-Gandhi	17-Mar	23-Mar
Arthur DelaCruz	10-Apr	19-Mar
Dermot Cassidy	21-Mar	28-Apr
Malcolm Toland	26-Mar	21-Apr
Mark Nolan	20-Mar	1-Apr
Patrick Hall	27-Mar	4-Apr
Agatha Johnson	24-Mar	10-Apr

Alia Afshar-Gandhi, the new Project Team Leader (PTL) of the FED project, visited the FED program from March 17-23<sup>rd</sup>. The purpose of this brief STTA was for Ms. Afshar-Gandhi to meet the FED team, USAID counterparts, local partners, and work with the Chief of Party on priority programmatic and operational issues. Over the course of the week, she had an opportunity to meet with FED staff, had a series of meetings with USAID, visited a couple of peri-urban horticulture sites, and participated in the FED “Vision Workshop.” In addition, meetings were held to examine FED’s current budget and to align it with the 2012 workplan.

Many meetings were held with FED local and expatriate staff members to discuss current workplan activities, monitoring & evaluation initiatives, priority deliverables, staffing needs, and current operational and administrative challenges. These meetings helped to inform where the PTL and other FED HO members can better assist the field team and what priority actions need to be taken.

Meeting USAID counterparts was useful in gauging their satisfaction with FED thus far and also in developing overall relationships.

Alia will be following up on a number of recruitment/staffing, contractual, and operational items from DAI’s home office.

Zan Northrip, the Managing Director of DAI’s Economic Growth sector, spent a week with the Liberia FED project in late March. The focus of his trip was to assist Jonathan Greenham with a team-building “Vision Workshop” for FED staff members. Among other goals, the Vision Workshop was intended to build a common understanding of USAID’s Feed the Future and Value Chain development models, and the resulting implications for the methods and approaches that FED will take to achieve its objectives.

Zan also spent time with FED management in mapping the work plan to the project’s 2012 budget, worked to secure DAI staff resources for upcoming FED needs, and met with USAID to measure client satisfaction with FED’s activities and performance to date. Zan’s trip was paid for by DAI, rather than by FED itself.



Better common understanding among FED team members of the two development models underpinning FED, i.e., Feed the Future and Value Chain Strengthening Project budget aligned with 2012 FED work plan.

Zan provided FED management with additional training materials on the value chain approach to agricultural development, which may be used in future training and team-building sessions.

## GENDER

### *Achievements*

Rebecca Sewall, from FED Partner CEDPA, conducted a two-week STTA to develop the project's gender strategy. The strategy will:

- Build LFED staff capacity in gender and build and utilize local talent in gender;
- Support the objectives of the Republic of Liberia Ministry of Agriculture Comprehensive Assessment of the Agricultural Sector Crosscutting Issues (2007), and its National Gender Policy;
- Support USAID's commitment to gender integration into agricultural programming including, those outlined in the USAID/Liberia Gender Assessment (2009);
- Support priority areas identified in FTF, FTF/Liberia MYS and the FTF Women and Agriculture Improved Global Food Security (2011); and
- Promote use of best practice approaches and interventions as identified in USAID initiatives such as the Initiative to End Hunger in Africa Gender Assessment Synthesis Report, and the GATE project.



A cross section of participants at the FED gender training conducted by STTA Rebecca Sewall

Dr. Sewall met with key staff members to identify key gender-based constraints in each task area and explore the possibility of expanding existing programming to better respond to these constraints. She also conducted a one-day training for project staff that provided them with an understanding of key gender concepts and terms, gender-based constraints facing women in agriculture in Liberia, and best practices for promoting women in agriculture through LFED programming. A draft gender strategy will be presented to the project for review on March 9, 2012.

## FIELD COORDINATION

### *Achievement*

Vegetable production at the Kakata demonstration site is ongoing. Seedlings transplanted during the period include:

Crop	Total number of seedlings transplanted
Cabbage	229
Lettuce	735
Onion	979
Sweet corn	180
Chili pepper	490
Sweet pepper	60
Carrots	450

The two acres site is intended to provide training for farmers vegetable farmers in and around the city of Kakata in Margibi County.

Rehabilitation of the 5.6 acres lowland in Doumpa, Tappeta District, Nimba County is ongoing. A vegetable production activity is also ongoing at the margin of the swamp.

### County Offices

#### **Bong County Office**

- Completed data collection using the quick and dirty collection tool developed by FED in Suakoko, Salala, Jorquellah and Sanoyea districts
- Held meeting with Arise and Shine Agriculture farm in Totota on possible collaboration
- Additional county staff recruitment ongoing

#### **Nimba County Office**

- Recruitment of County staff ongoing
- Procurement of office equipment and furniture ongoing

#### **Grand Bassa County (Compound # 3)**

- County staff recruited and deployed
- Completed quick and dirty data collection using tool developed by FED
- Conducted a cassava survey in District # 3 as stated below:

No	Name of groups	Group location	Membership		Total	App. Ha. cultivating	Comment
			M	F			
1	Kpain-kpaingbo	Wheagblenkon	1	14	15	1.8	
2	Dehdoo-yeajay	Blaygbahn	0	35	35	1.3	
3	GRASS	Timbo Town	28	36	64	7.5	More benef.

							Did not attend
4	Care for One Another	Moncray Town	10	15	25	1.6	
	Total:		39	100	139	11.2	

#### **Margibi County Office-Kakata**

- Office Assistant recruited and deployed
- Office equipment and furniture procured

#### **Margibi-Booker Washington Institute (BWI) Office**

- Negotiations for cost sharing ongoing

#### **Lofa County Office**

- County staff recruited and deployed
- Quick and dirty data collection planned for next quarter

## CHAPTER III: CONTRACT DELIVERABLES

As defined in the USAID-DAI contract, deliverables refer to four outputs in four areas: a) Annual Work Plans; b) Monthly, Quarterly, Annual and Intermittent Progress Reports; c) Trip Reports; and d) Performance and Impact Monitoring. The cumulative contracted Deliverables provided as of March 31, 2012 include the following:

<b>Work Plans and Documents</b>	
<i>Document</i>	<i>Submission date to USAID</i>
First Annual Work Plan (October 2011 through September 2012)	December 18, 2011
<b>Monthly, Quarterly, Annual and Intermittent Progress Reports</b>	
<i>Document</i>	<i>Submission date to USAID</i>
FED Report: November 2011	November 30, 2011
First Quarterly Report: October-December 2011	January 15, 2012
FED Report January 2012	January 31, 2012
FED Report February 2012	February 29, 2012
<b>Performance and Impact Monitoring</b>	
<i>Document</i>	<i>Submission date to USAID</i>
First Year Performance Management plan	December 12, 2011

## APPENDIX A: BASELINE SURVEY QUESTIONNAIR 2012

### FED BASELINE SURVEY QUESTIONNAIR 2012

#### A. INTRODUCTION

- 1) You have started a new household survey. Next you will set up the survey by entering information about yourself, your team, your location, and the date.
  1. Next (1)
- 2) ENUMERATOR Please type your first name
- 3) ENUMERATOR Please type your last name
- 4) ENUMERATOR What is your team code?
- 5) ENUMERATOR Please select the name of the COUNTY
  1. Bong (1)
  2. Lofa (2)
  3. Nimba (3)
  4. Bassa (4)
  5. Margibi (5)
  6. Montserrado (6)
- 6) ENUMERATOR Please select the name of the DISTRICT in BONG
  1. Fuamah (1)
  2. Jorquelleh (2)
  3. Kpaai (3)
  4. Panta (4)
  5. Suakoko (5)
  6. Yeallequelleh (6)
  7. Zota (7)
  8. Salala (8)
  9. Sanoyeah (9)
- 7) ENUMERATOR Please select the name of the DISTRICT in NIMBA
  1. Boe and Quilla (1)
  2. Buu-Yao (2)
  3. Doe (3)
  4. Garr-Bain (4)
  5. Leewehpea-Mahn (5)
  6. Meinpea-Mahn (6)
  7. Sanniquelle Mahn (7)
  8. Twan River (8)
  9. Yarmein (9)
  10. Yarpea Mahn (10)
  11. Yarwein Mehnsonnoh (11)
  12. Zoe Gbao (12)
  13. Wee-Gbehyl-Mahn (13)

14. Gbehlay-Geh (14)

8) ENUMERATOR Please select the name of the DISTRICT in BASSA

1. District #1 (1)
2. District #2 (2)
3. District #3 (3)
4. District #4 (4)
5. Neekreen (5)
6. Owensgrove (6)
7. St. John River City (7)
8. Commonwealth (8)

9) ENUMERATOR Please select the name of the DISTRICT in LOFA

1. Foya (1)
2. Kolahun (2)
3. Salayea (3)
4. Voinjama (4)
5. Zorzor (5)

10) ENUMERATOR Please input the name of the VILLAGE or TOWN

11) ENUMERATOR Please put your initials followed by the household number

Hint: *Example: JLC3. Numbers are Number your own households.*

12) ENUMERATOR Please enter the DATE of the interview

13) ENUMERATOR. Please enter the START TIME of interview below.

## **B. CONFIDENTIALITY**

14) ENUMERATOR, Begin the interview by explaining your purpose, assuring respondent of confidentiality, and obtaining consent.

15) ENUMERATOR, read the following: My name is \_\_\_\_\_. I am a researcher from the FED program and we are conducting a survey to learn about agriculture and enterprise activities, food preparation and wellbeing of households in this area. In order to get a full understanding of these activities we would like to speak with the household head.

## **C. HOUSEHOLD SCREENING**

16) ENUMERATOR, you will now begin the SCREENING section of the survey

17) How many households live in your house?

Hint: *Household is defined as the people eating from the same pot*

18) How many household heads are available to be interviewed?

1. No one is available (1)

2. 1 or more than 1 household heads are available (2)
- 19) ENUMERATOR: If no household heads are available to be interviewed, end the interview immediately and go to next house. Otherwise, continue interview.
  1. Okay (1)
- 20) May I speak to all the available household heads?
  1. Yes (1)
  2. No (2)
- 21) ENUMERATOR: If no household heads are available to be interviewed, end the interview immediately and go to next house.
  1. Okay (1)
- 22) ENUMERATOR: Ask all of the household heads available: Are you over 18 years old?
  1. Next (1)
- 23) ENUMERATOR: Dismiss those under 18. If no household heads remain, end interview immediately and go to next house.
  1. Okay (1)
- 24) ENUMERATOR: Ask all the remaining household heads if their household is involved in farming
  1. Okay (1)
- 25) ENUMERATOR: Dismiss those not involved in farming. If no household heads remain, end interview and go to next house. If one or more households remain, continue with the interview
  1. Okay (1)
- 26) ENUMERATOR: If more than one household head remains, complete randomization using dice.
  1. Next (1)
- 27) For the household head selected, read Informed Consent: You are being invited to participate in an interview, which includes questions on topics such as your family background, dwelling characteristics, asset ownership, income earning activities, and expe
  1. Next (1)
- 28) If you agree to be interviewed, we will talk to you for about an hour. The information you provide will help us to gather baseline information as we start our program. Your answers will be completely confidential; we will not share information with anyone
  1. Next (1)
- 29) Do you have any questions about the interview or what I have said?
  1. Next (1)
- 30) If in the future you have any questions about the interview, or concerns or complaints please contact our program by calling [0886753069]. We will leave one copy of this form for you so that you will have record of this contact information and about the st
  1. Next (1)
- 31) Do you agree to participate in the interview?

1. Yes (1)
2. No (2)

32) ENUMERATOR: If the selected household head does not agree to participate in the interview, END the interview and move on to the next house.

1. Okay (1)

#### **D. DEMOGRAPHICS**

33) ENUMERATOR, you will now begin the DEMOGRAPHICS section of the interview.

1. Next (1)

34) What type of household is this?

Hint: *Read the options out loud to the respondent*

1. Female-only headed household (1)
2. Male-only headed household (2)
3. Male and female joint household head (3)

35) Can we contact you if we have follow up questions?

1. Yes (1)
2. No (2)

36) What is the best number to reach you?

Hint: *If none, code as 0. Use only numbers. To access the number keyboard press the key where you see numbers*

37) Are you the main person involved in farming in your household?

1. Yes (1)
2. No (2)

38) What is your LAST NAME?

39) What is your FIRST NAME?

40) What other names are you known by?

Hint: *If none, put NA*

41) What is your AGE?

Hint: *Use only whole numbers. For example: 44*

42) ENUMERATOR: Select the SEX of the HOUSEHOLD HEAD

1. Female (1)
2. Male (2)

43) What is the highest level of EDUCATION that you completed?

1. No formal education (1)
2. Can read and write (2)
3. Primary - incomplete (3)
4. Primary - complete (4)



5. Junior secondary - incomplete (5)
6. Junior secondary - complete (6)
7. Secondary - incomplete (9)
8. Secondary complete - 7 (7)
9. Post-secondary (8)

44) Have you attended vocational school?

Name	Nickname	Relation to HHh	Age	Sex (M/F)	Education level	Vocational Ed? (Y/N)	Primary occup.	Secondary occup.
------	----------	-----------------	-----	-----------	-----------------	----------------------	----------------	------------------

1. Yes (1)
2. No (2)

45) What is your PRIMARY OCCUPATION?

1. Farmer (1)
2. Government employee (2)
3. Teacher (3)
4. Local NGO (4)
5. Student (5)
6. Unemployed (6)
7. Self-employed (7) *Please Specify:* \_\_\_\_\_
8. Other (8) *Please Specify:* \_\_\_\_\_

46) What is your SECONDARY OCCUPATION?

1. Farmer (1)
2. Government employee (2)
3. Teacher (3)
4. Local NGO (4)
5. Student (5)
6. Unemployed (6)
7. Self-employed (7) *Please Specify:* \_\_\_\_\_
8. Other (8) *Please Specify:* \_\_\_\_\_

47) How many people living in your household can eat from the same pot most days?

*Hint: Write down the number in your notebook*

48) The following questions will go over details of household members

*Hint: Household is defined as the people eating from the same pot*

1. Next (1)

49) Are there any other members in this household beside the household head?

1. Yes (1)
2. No (2)

50) If YES, Please fill out the details of any other household members on your paper form.

1. Okay (1)

HHh								

51) What is the main tribe of the household? If more than one tribe, use household head.

1. Bassa (1)
2. Bele (2)
3. Congo (3)
4. Dei (4)
5. Gbandi (5)
6. Gbei (6)
7. Gio (7)
8. Gola (8)
9. Kissi (9)
10. Kpelle (10)

11. Krahn (11)
12. Kru (12)
13. Mandingo (13)
14. Mano (14)
15. Mende (15)
16. Vai (16)
17. Fula (17)
18. Grebo (18)
19. Loma (19)
20. Other (20) *Please Specify:* \_\_\_\_\_

- 52) Does anyone in your household belong to a farming group?
1. Yes (1)
  2. No (2)
- 53) What is the name of the farming group?  
Hint: *Enter only one farming group name.*
- 54) Are there any other farming groups that your household belongs to?
1. Yes (1)
  2. No (2)
- 55) What is the name of the 2nd farming group?  
Hint: *Enter only one farming group name.*
- 56) Are there any other farming groups that your household belongs to?
1. Yes (1)
  2. No (2)
- 57) What is the name of the 3rd farming group?  
Hint: *Enter only one farming group name.*
- 58) Does anyone in your household belong to a women's group?
1. Yes (1)
  2. No (2)
- 59) What is the name of the women's group?  
Hint: *Enter only one women's group name.*
- 60) Are there any other women's groups that your household belongs to?
1. Yes (1)
  2. No (2)
- 61) What is the name of the 2nd women's group?  
Hint: *Enter only one women's group name.*
- 62) Are there any other women's groups that your household belongs to?
1. Yes (1)
  2. No (2)
- 63) What is the name of the 3rd women's group?  
Hint: *Enter only one women's group name.*
- 64) Does anyone in your household belong to an enterprise group?  
Hint: *Enterprise includes business activities for profit*
1. Yes (1)
  2. No (2)
- 65) What is the name of the enterprise group?  
Hint: *Enter only one enterprise group name.*
- 66) Are there any other enterprise groups that your household belongs to?

1. Yes (1)
2. No (2)

67) What is the name of the enterprise group?

Hint: *Enter only one enterprise group name.*

68) Are there any other enterprise groups that your household belongs to?

1. Yes (1)
2. No (2)

69) What is the name of the enterprise group?

Hint: *Enter only one enterprise group name.*

70) How do you get to the nearest market from your house?

1. Walk (1)
2. Motorbike (2)
3. Car / taxi (3)
4. Other (4) *Please Specify: \_\_\_\_\_*

71) How long does it take to get to the nearest market by WALKING in minutes?

Hint: *0 = none, 99 = don't know*

72) How long does it take to get to the nearest market by MOTORBIKE in minutes?

Hint: *0 = none, 99 = don't know*

73) How much does it cost to take a MOTORBIKE to the nearest market in Liberian Dollars?

Hint: *0 = none, 99 = don't know*

74) How long does it take to get to the nearest market by CAR / TAXI in minutes?

Hint: *0 = none, 99 = don't know*

75) How much does it cost to take a CAR / TAXI in Liberian Dollars?

76) How long does it take to get to the nearest market by OTHER in minutes?

Hint: *0 = none, 99 = don't know*

77) Do you listen to the radio?

1. Yes (1)
2. No (2)

78) If we were to put an agricultural radio show on air, what would be the best time to air it so that you would hear it?

1. Morning (1)
2. Daytime (2)
3. Evening (3)

79) What is your favorite radio show / program you listen to?

Hint: *NA = don't know*

80) What is your favorite radio station?

Hint: *NA = don't know*

## E. AGRICULTURAL AND LIVESTOCK ACTIVITIES

81) We are now going to ask you about AGRICULTURAL AND LIVESTOCK ACTIVITIES for your household.

1. Next (1)

82) Do you receive income from the following activities?

Hint: *If respondent doesn't know monthly average, specify time frame after dollar amount in the answer. For example "100 LD a day". 0 = none, 99 = don't know*

Income Category	Yes/No	Average Monthly Income Dry Season (Liberian Dollar)	Average Monthly Income Rainy Season (Liberian Dollar)
Field Crops ( <i>Example: Rice or Cassava</i> )			
Cash Crops ( <i>Example: Cocoa, Oil Palm, Rubber, Coffee</i> )			
Livestock or Livestock Products			
Sales of Orchard Products ( <i>Example: Banana, orange, grapefruit, lemon, plaintain, pinneapple</i> )			
Mining			
Casual Labor			
Skilled Labor			
Salary or Government Job			
Firewood or Charcoal			
Handicrafts			
Other Government Benefits			
Begging			

Income Category	Yes/No	Average Monthly Income Dry Season (Liberian Dollar)	Average Monthly Income Rainy Season (Liberian Dollar)
Motorbikes ( <i>Driving, renting, etc</i> )			
Driving a Car or Taxi			
Housing Rentals			
Rubber			
Business or Petty Trade			
Remittances			
Other ( <i>Please Specify:</i> _____)			

83) How much money did you spend on the following items to support your CROP activities during the past 12 months?

Hint: *DO NOT* include money spent on livestock in your answers. This will be covered later.

Hint 2: none = 0, don't know = 99.

Item Supporting Crop Activity	Total Liberian Dollars Spent ( <i>Last 12 month</i> )
Water	
Fuel	
Electricity	
Seed	
Seedlings	
Storage	
Food Processing	
Fertilizer	
Pesticides	

Item Supporting Crop Activity	Total Liberian Dollars Spent  (Last 12 month)
Security	
Transport	

84) How many plots of land do you farm on?

Hint: *Plots are separate pieces of land regardless of size covered by a specific type of vegetation. Include shared and communal plots.*

85) For the FIRST plot of land: How many acres is it?

Hint: *Decimals such as 1.5 accepted*

86) For the FIRST plot of land: Have you farmed on this plot for MORE than one year?

1. Yes (1)
2. No (2)

87) For the FIRST plot of land: is the field swamp or upland?

1. Swamp (1)
2. Upland (2)
3. Other (3)      *Please Specify: \_\_\_\_\_*

88) For the FIRST plot of land: If upland, where does water come from?

1. Stream (1)
2. Well (2)
3. Rainwater (3)
4. Other (4)      *Please Specify: \_\_\_\_\_*

89) For the FIRST plot of land: If upland, how is the water transported?

1. Bucket (1)
2. Pump (2)
3. Other (3)      *Please Specify: \_\_\_\_\_*

90) For the FIRST plot of land, please complete the following sentence: The land is...

Hint: *Read out loud to respondent*

1. Owned (1)
2. Rented in (2)
3. Rented out (3)
4. Town / government land (free) (4)
5. Shared / cooperative land (5)

91) For the FIRST plot of land: What is the PRIMARY mode of TRANSPORTATION you use to get your plot?

Hint: *Select the primary method of transportation to the plot*

1. Walk (1)

2. Motorbike (2)
3. Car / Taxi (3)
4. Other (5) *Please Specify:* \_\_\_\_\_

92) For the FIRST plot of land: How long does it usually take you to travel to this plot in minutes?

93) Do you farm on any other plots?

1. Yes (1)
2. No (2)

94) For the SECOND plot of land: How many acres is it?

*Hint: Decimals such as 1.5 accepted*

95) For the SECOND plot of land: Have you farmed on this plot for MORE than one year?

1. Yes (1)
2. No (2)

96) For the SECOND plot of land: is the field swamp or upland?

1. Swamp (1)
2. Upland (2)
3. Other (3) *Please Specify:* \_\_\_\_\_

97) For the SECOND plot of land: If upland, where does water come from?

1. Stream (1)
2. Well (2)
3. Rainwater (3)
4. Other (4) *Please Specify:* \_\_\_\_\_

98) For the SECOND plot of land: If upland, how is the water transported?

1. Bucket (1)
2. Pump (2)
3. Other (3) *Please Specify:* \_\_\_\_\_

99) For the SECOND plot of land, please complete the following sentence: The land is...

*Hint: Read out loud to respondent*

1. Owned (1)
2. Rented in (2)
3. Rented out (3)
4. Town / government land (free) (4)
5. Shared / cooperative land (5)

100) For the SECOND plot of land: What is the PRIMARY mode of TRANSPORTATION you use to get your plot?

*Hint: Select the primary method of transportation to the plot*

1. Walk (1)
2. Motorbike (2)
3. Car / Taxi (3)
4. Other (5) *Please Specify:* \_\_\_\_\_

101) For the SECOND plot of land: How long does it usually take you to travel to this plot in minutes?



102) Do you farm on any other plots?

1. Yes (1)
2. No (2)

103) For the THIRD plot of land: How long does it usually take you to travel to this plot in minutes?

104) Do you farm on any other plots?

1. Yes (1)
2. No (2)

105) For the THIRD plot of land: How many acres is it?

Hint: *Decimals such as 1.5 accepted*

106) For the THIRD plot of land: Have you farmed on this plot for MORE than one year?

1. Yes (1)
2. No (2)

107) For the THIRD plot of land: is the field swamp or upland?

1. Swamp (1)
2. Upland (2)
3. Other (3) *Please Specify:* \_\_\_\_\_

108) For the THIRD plot of land: If upland, where does water come from?

1. Stream (1)
2. Well (2)
3. Rainwater (3)
4. Other (4) *Please Specify:* \_\_\_\_\_

109) For the THIRD plot of land: If upland, how is the water transported?

1. Bucket (1)
2. Pump (2)
3. Other (3) *Please Specify:* \_\_\_\_\_

110) For the THIRD plot of land, please complete the following sentence: The land is...

Hint: *Read out loud to respondent*

1. Owned (1)
2. Rented in (2)
3. Rented out (3)
4. Town / government land (free) (4)
5. Shared / cooperative land (5)

111) For the THIRD plot of land: What is the PRIMARY mode of TRANSPORTATION you use to get your plot?

Hint: *Select the primary method of transportation to the plot*

1. Walk (1)
2. Motorbike (2)
3. Car / Taxi (3)
4. Other (5) *Please Specify:* \_\_\_\_\_

112) For the THIRD plot of land: How long does it usually take you to travel to this plot in minutes?

113) Do you farm on any other plots?

1. Yes (1)
2. No (2)

114) Which of the following TRADITIONAL VEGETABLES have you grown during the past 12 months?

Hint: *Check all that apply. These are traditional Liberian vegetables that do NOT include corn.*

1. Bitter ball (1)
2. Okra (2)
3. Potato green (3)
4. Other (4) *Please Specify:* \_\_\_\_\_
5. None of the above (5)

115) Which of the following EXOTIC VEGETABLES have you grown during the past 12 months?

Hint: *Check all that apply.*

1. Cabbage (1)
2. Tomato (2)
3. Lettuce (3)
4. Other (4) *Please Specify:* \_\_\_\_\_
5. None of the above (5)

116) Which of the following OTHER CROPS have you grown during the past 12 months?

1. Rice (1)
2. Cassava (2)
3. Banana (3)
4. Mango (4)
5. Papaya (5)
6. Oil palm (6)
7. Coffee (7)
8. Cocoa (8)
9. Corn (9)
10. Other (10) *Please Specify:* \_\_\_\_\_

117) Now I'm going to ask you about people working on your agricultural and livestock production.

1. Next (1)

118) How many people work on your agriculture and livestock production?

Hint: *Include both paid and unpaid. Include family and yourself.*

119) How many are UNPAID MALE laborers?

Hint: *Include family and yourself.*

120) How many are UNPAID FEMALE laborers?

Hint: *Include family and yourself.*

121) How many are PAID MALE laborers?

Hint: *Include family and yourself.*

122) How many are PAID WOMEN laborers?

Hint: *Include family and yourself.*

123) Now I'm going to ask you some questions on processing equipment.

124) Do you have access to the following processing equipment?

Processing Equipment	Yes	No
Rice Mill		
Rice Dryer		
Vegetable Dryer		
Oil Press		
Water Pump		
Cassava Grater		
Other (Please Specify_____)		

125) Has your household borrowed any money to support your agricultural or livestock activities in the past 12 months?

1. Yes (1)
2. No (2)

126) How many loans did you take out?

127) What was the 1st loan for?

128) How much was the 1st loan in LIBERIAN DOLLARS?

Hint: *Don't know* = 99

129) What was the source of this 1st loan?

1. Bank (1)
2. Microfinance (2)
3. Community savings or credit group (3)
4. Family or friends (4)
5. Solidarity group (5)
6. Other (6) *Please Specify: \_\_\_\_\_*

130) Did your household borrow any other money to support your agricultural or livestock activities in the past 12 months?

1. Yes (1)

2. No (2)

131) For this 2nd loan: What was the loan for?

132) For this 2nd loan: How much was the loan in LIBERIAN DOLLARS?

Hint: *Don't know* = 99

133) For this 2nd loan: What was the source of this loan?

1. Bank (1)
2. Microfinance (2)
3. Community savings or credit group (3)
4. Family or friends (4)
5. Solidarity group (5)
6. Other (6) *Please Specify:* \_\_\_\_\_

134) Did your household borrow any other money to support your agricultural or livestock activities in the past 12 months?

1. Yes (1)
2. No (2)

135) For this 3rd loan: What was the loan for?

136) For this 3rd loan: How much was the loan in LIBERIAN DOLLARS?

Hint: *Don't know* = 99

137) For this 3rd loan: What was the source of this loan?

1. Bank (1)
2. Microfinance (2)
3. Community savings or credit group (3)
4. Family or friends (4)
5. Solidarity group (5)
6. Other (6) *Please Specify:* \_\_\_\_\_

138) Did your household borrow any other money to support your agricultural or livestock activities in the past 12 months?

1. Yes (1)
2. No (2)

139) For this 4th loan: What was the loan for?

140) For this 4th loan: How much was the loan in LIBERIAN DOLLARS?

Hint: *Don't know* = 99

141) For this 4th loan: What was the source of this loan?

1. Bank (1)

2. Microfinance (2)
3. Community savings or credit group (3)
4. Family or friends (4)
5. Solidarity group (5)
6. Other (6) *Please Specify: \_\_\_\_\_*

142) How many of the following livestock do you have?

Hint: *none = 0, don't know = 99*

Type of Livestock	Total Number
Cows	
Goats	
Sheep	
Guinea Fowl	
Chickens	
Ducks	
Pigs	

143) How much money did you spend on the following items to support your LIVESTOCK activities in the past 12 months in LIBERIAN DOLLARS?

Hint: *none = 0, don't know = 99*

Items Supporting Livestock Activity	Total Liberian Dollars Spent (Last 12 month)
Water	
Fuel	
Security ( <i>refers only to personnel</i> )	
Rent	
Vaccinations	
Feed	

Items Supporting Livestock Activity	Total Liberian Dollars Spent <i>(Last 12 month)</i>
Transport	
Other <i>(Please Specify:</i> _____)	

## F. HOUSEHOLD DWELLING CHARACTERISTICS

144) ENUMERATOR: Now we will go over some household dwelling characteristics

1. Next (1)

145) How many TOTAL households live in this same house or apartment?

Hint: *Include the respondent's household in the total.*

146) Is this house or apartment rented, owned, borrowed, or other?

1. Rented (2)
2. Owned (2)
3. Borrowed (no payment) (3)
4. Other (4) *Please Specify:* \_\_\_\_\_

147) How many rooms are there in this house or apartment?

Hint: *Do not count bathrooms, hallways, garage, toilet, cellar, kitchen*

148) How many rooms are used exclusively for sleeping?

149) What is the main type of toilet your household uses?

1. Flush, shared (1)
2. Flush, private (2)
3. Ventilated improved pit latrine (3)
4. Pit latrine (4)
5. Pan or bucket (5)
6. No toilet (6)
7. Community toilet (7)
8. Other (8) *Please Specify:* \_\_\_\_\_

150) Is there a water source inside the house or apartment?

1. Yes (1)
2. No (2)

151) How long does it take to get from your house to the water source in MINUTES? What is the main source of water for general use for your household?

1. Piped into dwelling (1)
2. Piped into plot or yard (2)
3. Public tap (someone else's private tap) (3)
4. Tube well or borehole (4)
5. Protected spring (5)
6. Rain water collection (6)
7. Unprotected dug well or springs (7)
8. River or ponds or streams (8)
9. Bottled water (9)
10. Protected dug well (10)
11. Tankers truck or vendor (11)
12. Other (12) *Please Specify:* \_\_\_\_\_

152) What is the main source of drinking water for your household?

1. Piped into dwelling (1)
2. Piped into plot or yard (2)
3. Public tap (someone else's private tap) (3)
4. Tube well or borehole (4)
5. Protected spring (5)
6. Rain water collection (6)
7. Unprotected dug well or springs (7)
8. River or ponds or streams (8)
9. Bottled water (9)
10. Protected dug well (10)
11. Tankers truck or vendor (11)
12. Other (12) *Please Specify:* \_\_\_\_\_

153) Do you use a process to prepare the water used for drinking?

1. Yes (1)
2. No (2)

154) What is the process through which you prepare the water used for drinking?

1. Boiled (1)
2. Filtered and boiled (2)
3. Iodine or other mineral or natural treatments (3)
4. No treatment (4)
5. UV treated (5)
6. Other (6) *Please Specify:* \_\_\_\_\_

155) Does this house/apartment have access to electricity?

1. Yes (1)
2. No (2)

156) What is the main lighting source for your household?

1. Electricity via national grid (1)
2. Solar panel (2)
3. Shared / public generator (3)
4. Private generator (4)

5. Lanterns or candles or paraffin (5)
6. Fire lit sticks, grass or pit (6)
7. Torch / Flashlight (7)
8. Public or shared generator (8)
9. Other (9) *Please Specify:* \_\_\_\_\_

157) What is the main source of cooking fuel for your household?

1. Electricity (1)
2. Piped or liquid propane gas (biogas) (2)
3. Kerosene (3)
4. Charcoal (4)
5. Animal dung (5)
6. Agricultural crop residue (6)
7. Firewood (7)
8. Other (8) *Please Specify:* \_\_\_\_\_

158) Do you cook in an external kitchen or internal kitchen?

1. External (1)
2. Internal (2)

159) Where do you carry your dirt/garbage?

1. Collected by local authority (1)
2. Collected by private firm (2)
3. Own garbage pit or heap (3)
4. Own burned or buried (4)
5. Dumped in vacant land or property (5)
6. Dumped in river, lake or sea (6)
7. Burying in a hole in the dirt (7)
8. Public garbage (8)
9. Other (9) *Please Specify:* \_\_\_\_\_

160) Thank you. This ends our interview but I would like to write down some observations before we end our interview.

1. Next (1)

## **G. HOUSEHOLD OBSERVATIONS**

161) ENUMERATOR OBSERVE (DO NOT ASK). Please observe the following aspects of the respondent's house/apartment and note your observations.

1. Next (1)

162) Roof top material (outer covering)

1. Tile (1)
2. Corrugated metal (2)
3. Plastic sheeting (3)
4. Thatched or vegetable matter or sticks (4)
5. Other (5) *Please Specify:* \_\_\_\_\_

163) Floor material



1. Earth or mud (1)
2. Concrete or flag stone or cement (2)
3. Tile or bricks (3)
4. Wood (4)
5. Other (5)      *Please Specify:* \_\_\_\_\_

164) Exterior wall material

1. Earth or mud (1)
2. Concrete or flag stone or cement (2)
3. Tile or bricks (3)
4. Wood (4)
5. Other (5)      *Please Specify:* \_\_\_\_\_

165) State of house or apartment

1. In excellent repair, no sign of wear (1)
2. In good shape, some minor wear-and-tear or damage (2)
3. In moderate condition, some damage and moderate wear and tear (3)
4. In poor shape, much damage (4)
5. In very bad shape (5)

166) Please take a GPS point of the household

167) ENUMERATOR Please enter the END TIME of the interview

168) This is the end of our interview. Thank you for your time.

## APPENDIX B: BASELINE SURVEY ENUMERATOR INTERVIEWEE LOG

### Enumerator Interviewee Log

**ENUMERATOR:**

**County:**

**District:**

**Village:**

DATE	HOUSEHOLD ID	RESPONDENT NAME	SEX (M/F)	START TIME	END TIME	CONTACT		COMMENTS	SURVEY OUTCOME: Complete, Incomplete ( <i>Mark Time Ended</i> ), Refused
						Phone Number	House Location (GPS coordinates)		
							Lat: Lng: Alt: Acc:		
							Lat: Lng: Alt: Acc:		
							Lat: Lng: Alt: Acc:		
							Lat: Lng:		

[illegible]

## APPENDIX C: BASELINE SURVEY VILLAGES VISITED TRACKER

### Villages Visited Tracker

Enumerator:

County:

<u>Date</u>	<u>District</u>	<u>Town/Village</u>	<u>Roads</u>				<u>Comments</u>
			<u>GPS Reading 1</u> (Main Road Connect)	<u>GPS Reading 2</u> (Town Center)	<u>Est. Travel Time</u> <u>To Destination</u> <u>From Main Road</u>	<u>Condition</u> <sup>1</sup>	
			Lat:  Lng:  Alt:	Lat:  Lng:  Alt:			
			Lat:  Lng:  Alt:	Lat:  Lng:  Alt:			
			Lat:  Lng:  Alt:	Lat:  Lng:  Alt:			

<sup>1</sup> Either **Good** (paved); **Fair** (rough); **Poor** (bad) or **very Poor** (hardly accessible)

			Lat: Lng: Alt:	Lat: Lng: Alt:			
			Lat: Lng: Alt:	Lat: Lng: Alt:			