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# PRODUCTION, FINANCE, AND IMPROVED TECHNOLOGY PLUS (PROFIT+)

**TASK ORDER NO. AID-611-TO-12-00002**

**QUARTERLY PERFORMANCE REPORT #6  
JANUARY 1 – MARCH 31 2014**

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## **DISCLAIMER**

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

## ACRONYMS

AFE	ACTION FOR ENTERPRISE
ASNAPP	AGRIBUSINESS IN SUSTAINABLE NATURAL AFRICAN PLANT PRODUCTS
BEO	BLOCK EXTENSION OFFICERS
CASH	COMMERCIAL AGRIBUSINESS FOR SUSTAINABLE HORTICULTURE
CB	COPPERBELT PROVINCE
CEO	CAMP EXTENSION OFFICER
CFU	CONSERVATION FARMING UNIT
COMACO	COMMON MARKETS FOR CONSERVATION
COR	CONTRACT OFFICE'S REPRESENTATIVE
CRS	CATHOLIC RELIEF SERVICES
DACO	DISTRICT AGRICULTURAL COORDINATOR
DFA	DISTRICT FARMERS' ASSOCIATION
DWA	DISTRICT WOMEN'S DEVELOPMENT ASSOCIATION
EP	EASTERN PROVINCE
EPFC	EASTERN PROVINCE FARMERS' COOPERATIVE
FRA	FOOD RESERVE AGENCY
FSRP	FOOD SECURITY RESEARCH PROJECT III
FTF	FEED THE FUTURE
FTFMS	FEED THE FUTURE MONITORING SYSTEM
GMO	GENETICALLY MODIFIED ORGANISMS
ICRISAT	INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS
MAL	MINISTRY OF AGRICULTURE AND LIVESTOCK
MFI	MICRO FINANCE INSTITUTION
MGCD	MINISTRY OF GENDER AND CHILD DEVELOPMENT
MOE	MINISTRY OF EDUCATION
MOH	MINISTRY OF HEALTH
PMEP	PERFORMANCE MONITORING AND EVALUATION PLAN
QDS	QUALITY DECLARED SEED
SATH	SOUTH AFRICAN TRADE HUB
SCCI	SEED CONTROL AND CERTIFICATION INSTITUTE
SMFM	SELL MORE FOR MORE
USG	UNITED STATES GOVERNMENT
VC	VALUE CHAIN
WFP	WORLD FOOD PROGRAMME
ZAMACE	ZAMBIA AGRICULTURAL COMMODITY EXCHANGE
ZANACO	ZAMBIA NATIONAL COMMERCIAL BANK
ZARI	ZAMBIA AGRICULTURE RESEARCH INSTITUTE
ZNFU	ZAMBIA NATIONAL FARMERS UNION

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## **I. INTRODUCTION**

The Production, Finance, and Improved Technology Plus (PROFIT+) is a United States Agency for International Development (USAID)/Zambia-funded project under Contract No. AID-623-I-10-00001 and Task Order No. AID-611-TO-12-00002. The program will improve smallholder productivity, expand markets and trade, and increase private sector investment in agriculture-related activities. This quarterly report covers the period January 1, 2014, through March 31, 2014. It focuses on the progress made on key activities during this quarter.

## **II. QUARTERLY REPORT AT A GLANCE**

### **1. IMPROVED SMALLHOLDER PRODUCTIVITY**

- Seven private sector partnerships established between input suppliers and community agro dealers to facilitate smallholder adoption of sustainable technologies
- A sample survey of demo host farmers (DHF's) indicated that 93 percent applied sustainable technologies.
- For field crops, 597 demo host farmers were trained by the project in roles and responsibilities of managing demo plots and farmer field schools (FFS)
- In horticulture, 52 farmer advisors established seedling production greenhouses
- The project introduced 90 horticulture small-scale farmers to Vision Fund; 58 Farmer Advisors (FA) were trained in product knowledge and drip irrigation system installation. Forty-three horticulture producer groups, with 209 female and 340 male members, were formed and will be linked to MFIs.

### **2. EXPANDED MARKETS AND TRADE**

- Project staff trained horticulture farmers to calculate incremental sales and gross margins
- PROFIT+ continued to build its partnerships with private sector buyers and estimates that it will achieve the facilitation of more than 200,000 MT of commodity
- The project held discussions between a large buyer and processor (of groundnuts, maize and soy) and two financial service providers for trade finance of up to \$1 million. This deal has the potential to create a market for up to 80,000 farmers.

### **3. INCREASED PRIVATE SECTOR INVESTMENT**

- Three Concept Notes received from private partners for investment including two warehouses and processing facilities requiring \$1.2 million in investment, a \$200,000 investment in a peanut processing plant and \$1.2 million investment in a malnutrition therapeutic food plant.
- The project continued to work with WFP on its \$1 million investment plan for a 500 MT warehouse in Katete.

#### **4. ACCESS TO FINANCE**

- Established links between Vision Fund, a local MFI, to various segments of project beneficiaries
- Nine agro dealers from Chipata district benefit from PROFIT + trainings, establish strategic alliances with input companies and have capacity to access loans from MFIs
- Formation of 200 SILC groups with 3,102 beneficiaries

#### **5. GENDER MAINSTREAMING**

- PROFIT+ built alliances with MAWA project, CARE and ZCPT (Zambia-led Prevention Initiative) project working in Eastern Province (EP) to address issues of nutrition, HIV/AIDS to improve the livelihoods of those affected.
- The project conducted couple's sensitization trainings, which resulted in improved joint decision-making, sharing of responsibilities and active female participation throughout the horticulture value chain for five couples in Palabana.
- Celebrated International Women's Day with project partners in Saili community to recognize the active roles that women play in social economic empowerment

#### **6. ENVIRONMENTAL COMPLIANCE**

- In collaboration with MAL staff 80 percent of the 690 demo sites were visited to determine that the farmers are adopting sustainable and environmentally friendly technologies
- Provided technical support in environmental sustainability to four grant applicants in identifying appropriate mitigation measures to be included in their proposals
- Fifty-eight farmer advisors were trained in horticulture product knowledge, including safe practices in the use of crop protection products.
- Consultants were chosen for next quarter's training on Integrated Pest Management (IPM), Spray Service Provision (SSP) and Environmental Mitigation & Monitoring Plan (EMMP).
- Thirty-nine processors and smallholder farmers were trained in Aflatoxin removal from groundnut crops and were encouraged to apply what they learned in the preparation of their EMMPs.
- There were 1,489 farmers sensitized on environmental compliance during farmer field days.

#### **7. MONITORING & EVALUATION**

- Assessed smallholder application of sustainable technologies to monitor the performance of demo plots and assess suitability of demonstration plots for field days
- Seventy-four percent of 1,112 farmers surveyed reported being trained in at least one technology.

- It is estimated that due to application of technologies, production of maize is expected to increase by 43.4 percent and groundnuts by 4.4 percent. Soy and sunflower have an estimated increase of 32.9 and 27.7 percent, respectively.
- The project distributed 3,750 FFS registers and 6,050 gross margin calculation tools at all project demo sites

**TABLE 1: DASHBOARD OF PROJECT PROGRESS AGAINST TARGETS AND SELECTED INDICATORS**

No	Indicator Source	Indicator Name	Actual October 2012-September 2013	Year 2 Targets	Actual Quarter 1 October – December 2013	Actual Quarter 2 January – March 2014	Actual Cumulative to Date
1	FTF 4.5.2-14	Number of vulnerable households benefiting directly from USG assistance	31,912	86,250	6,642	54,894	54,894
2	FTF 4.5.2-13	Number of rural households benefiting directly from USG interventions (S)	39,890	117,000	6,642	67,771	67,771
3	FtF4.5.2-7	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	48,501	86,250	6,698	72,371	72,371
10	FtF4.4.5.2-5	Number of farmers and others who have applied new technologies or management practices as a result of USG assistance	13,100	74,000	1,290	70,505	70,505
11	PROFIT	Number of demonstration plots established	417	3,004	2,760	2,764	2,764
12	FtF 4.5.2-2	Number of hectares under improved technologies or management practices as a result of USG assistance	5,230	70,000	173	66,978.42	66,978.42
13	FtF 4.5.2-11	Number of food security private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) receiving USG assistance	352	432	536	1,143	1,143
14	4.5.2(42): (4.5.2-28)	4.5.2(42): (4.5.2-28) Number of private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) that applied new technologies or management practices as a result of USG assistance (RIA) (WOG)	107	227	414	836	836
15	4.5(2)	Number of jobs attributed to FTF implementation	150	450	20	20	150
16	PROFIT +	Value of new investment grants disbursed	\$640,660	\$3,000,000	\$353,420	0	\$994,080
17	PROFIT +	Number of new investment grants disbursed		1,050	1,050	2	1052
18	4.5.2(23):	Value of incremental sales (collected at farm-level) attributed to FTF implementation (RIA)	US\$11,250,000.00	\$116,194,022	\$275,154	\$ 3,984,485	\$15,509,639

### III. PROJECT IMPLEMENTATION

#### 1. IR1: IMPROVED SMALLHOLDER PRODUCTIVITY

##### A. MEETINGS WITH BOMA AND COMMUNITY BASED AGRODEALERS

Meetings were held on one-on-one basis between seven Chipata based agro dealers and Zamseed company, Panner Seed, Plant Agric Chem, Vet Pharmacy, SeedCo, Kumawa, and MRI. The purpose of these meetings was to facilitate linkages between input suppliers and the district -based agro dealers.

The district-level agro dealers supply agro-inputs to the community-based agro dealers and since input suppliers do not provide them with commodities on consignment; they too do not extend that facility to the community agro dealers. As a result, community agro dealers have low levels of stock, and huge transportation costs since they buy regularly whenever they have funds. Suppliers bemoaned the challenge of entrusting their stock to agro dealers on consignment due to lack of capacity by agro dealers to manage stock, low levels of trust and poor marketing strategies, which lead to low demand from agro dealers to be transported to them. Suppliers also want to have a forum where they can meet community agro dealers to build trust and increase business transactions.

The project also held meetings with 109 of the 123 trained community-based agro dealers. The meetings were intended to establish the status and progress after the training conducted last year. The findings are as follows:

- Fifty-four out of the 109 agro dealers interviewed said that they are actively selling agro inputs in well-established shops that are either owned or rented.
- Ten of the 54 have since developed relationships with input suppliers and receive products (mainly maize seed and fertilizer) on consignment. Other products are bought on cash basis with a pre-arranged discount between five and 10 percent.
- Despite the discounts, community agro dealers indicated that their net profits are very small because of transportation costs and low turnover of products they purchase per trip from district town centers (or *bomas*).

The remaining 55 community agro dealers attribute their slow uptake to poor access to financial resources to invest in the business, lack of formal linkage to input suppliers, and the lack of proper storage facilities that can enable input suppliers to provide commodities on consignment. Based on this information, the project engaged the District Agro-dealer Association to facilitate the linkage of agro dealers to input suppliers.

## B. MONITORING INPUT DISTRIBUTION

### *Improving Partnerships between Input Suppliers and Community Agro-dealers*

To strengthen the relationship between input suppliers and community agro dealers, and increase transactions, the project is developing business models with the identified agro dealers that will be supported by the IIP Fund. The process for the development of a viable model is as follows:

1. The project developed a shortlist of 20 potential grantees who will be invited to submit a concept note to the project grant fund by April 15th.
2. The project has arranged meetings with shortlisted potential grantees to develop a pilot program business model for the grantee and the village-level sales agents to be completed by May 15th.
3. The project plans to work with grantees to finalize the terms of their grants and roll out any necessary logistical planning, training, and systems in preparation for the 2014/2015 sales season--from May 15th--September 1st.

## C. ASSESSMENT OF APPLICATION OF SUSTAINABLE TECHNOLOGIES

The project has conducted an assessment exercise to determine the above three parameters; many others were done through a questionnaire. The objectives of the assessment were to:

- a. Establish the extent to which technologies are applied by smallholder farmers;
- b. Monitor performance of the demo plots; and
- c. Identify demo plots to host the 2014 field days.

The questionnaire was reviewed, teams were formed and a sample size developed to facilitate the capturing of the data. A total of 12 enumerators and eight staff were trained in the administration of the questionnaires and sampling of the lead and smallholder farmers. The DHF were pre sampled using the current a list of DHFs. Below is the table showing the sample size by district.

**TABLE 2: SAMPLE SIZE OF INTERVIEWED DHFs, LEAD FARMERS, AND OTHER FARMERS DURING THE SURVEY**

District	Number of DHF	Number of lead farmers	Number of smallholder farmers	Total per to be sampled district
Chipata	36	72 (2*36)	216 (3*36)	324
Katete	30	60 (2*30)	180 (3*60)	270
Petauke	36	72 (2*36)	216 (3*36)	324
Lundazi	36	72 (2*36)	216 (3*36)	324
<b>Totals</b>	<b>138</b>	<b>276</b>	<b>828</b>	<b>1,242</b>

After the analysis, the following findings were deduced:

- Maize is grown by 96 percent of the respondents. The commonly applied technologies in maize include use of improved seed (82 percent), ripping (35 percent), basins (35 percent) mechanical timely weeding (98 percent), early planting (85 percent) and crop rotation (over 85 percent); and herbicides use (24 percent).
- Soybeans are grown by 92 percent of the respondents. Commonly applied technologies in soybeans include ripping (40 percent), basins (less than 20 percent), mechanical timely weeding (85 percent), crop rotation (85 percent), early planting (65 percent). Less than 20 percent reported using herbicides and less than 35 percent reported use of improved seeds.
- Groundnuts are grown by 92 percent of the respondents; commonly technologies applied include mechanical timely weeding (90 percent), crop rotation (75 percent), early planting (70 percent); herbicide use is less than 20 percent and improved seed is less than 30 percent of the respondents.
- Sunflower grown by 92 percent of the respondents, commonly applied technologies in sunflower include mechanical timely weeding (above 90 percent), crop rotation (above 80 percent), early planting (less than 78 percent). Meanwhile, less than 30 percent of the respondents reported use of herbicides and less than 35 percent said they use improved sunflower seed.

#### D. ORGANIZE AND CONDUCT FIELD DAYS

Fifteen sites were selected to host the field days per District in accordance with Table 3, below. Approximately 130 smallholder farmers were expected to gather and learn at each of the demo-sites. A number of private and public partners also participated and explained their products to the smallholder farmers in attendance. The project used this time to introduce post-harvest activities that will be covered in the training before harvest. Post-harvest topics included harvesting and drying of groundnuts, storage for maize, soybeans and sunflower.

**TABLE 3: NUMBER OF FIELD DAYS HELD UP TO 31ST MARCH 2014**

District	Camp	Date	Males	Females	Total	Participating Partners
Lundazi	Kapichilia	26.3.14	81	129	210	MAL, PIONEER, ZAMSEED, CARGILL, MAWA
	Central 1	26.3/14	73	102	175	MAL, MRISEED, ZAMSEED, CARGILL
	Chitala	28.3.14	155	96	251	MAL, ZAMSEED, CARGIL
Petauke	South Nyamphande 1	25.3.14	72	116	188	MAL, SEEDCO
	Lusowe	27.3.14	85	28	113	MAL
Katete	Kangwelema	25.3.14	32	13	45	MAL, HARVESTPLUS (ORANGE MAIZE)
	Kamphambe	27.3.14	53	28	81	MAL, HARVEST PLUS (ORANGE MAIZE), NWK

Chipata	Mapala	25.3.14	68	62	130	MAL, COMACO, CFU, CARGIL, NWK, ATS
	Sisinje	27.3.14	90	71	161	MAL, CFU, COMACO, NWK, PLANT AGRIC-Chem
	Chisutu	28.3.14	63	72	135	MAL, CARGIL, COMACO, COMMUNITY DEV, NWK, CFU
<b>Total</b>			<b>772</b>	<b>717</b>	<b>1,489</b>	

## E. FARMER FIELD SCHOOLS

The DHF model is a farmer-to-farmer extension methodology in which the DHF is selected, and trained in the general management of the demo plot and the technologies being promoted by the project. The DHF in turn takes lead to train the rest of the members of the FFS. The number make-up of the DHF model is as follows: One DHF, five Lead Farmers, and 100 small holder farmers (20 ordinary farmers per Lead Farmer) work together, giving a total of 106 farmers. This number of farmers makes up the FFS, which meet regularly to share knowledge and train farmers in new technologies.



FIGURE 1: SUZAN CHIHANE LUNDAZI DURING FIELD DAY

Ministry of Agriculture and Livestock (MAL) staff were also trained through training-of-trainers (ToTs) after which they in turn conducted training to DHFs in their respective agricultural camps. Topics include the general management of the demo plot and the benefits of applying new technologies promoted by PROFIT+. A total of 597 DHFs out of 690 were trained in the FFS methodology during the period under review. Ninety-three DHFs were absent (55 males and 38 females), because bridges were washed away and roads were impassable. Make-up trainings will be conducted once the roads become passable. All attendees were captured using the Farmer Field School Quarterly Register kept by Lead Farmers. The register captures data such as:

- Trainings attended by each farmer;
- Technologies practiced by each farmer; and
- Hectares under improved technologies.

## F. HORTICULTURAL SEEDLING PRODUCTION

By the end of the quarter, 52 out of the targeted 60 sites had greenhouses constructed in which tomato and onion seedlings were planted. These greenhouses are planted with over 100,000 seeds of tomatoes and over 450,000 of onions. These seeds can plant five hectares each for tomatoes and 4.5 hectares for onions once transplanted. The varieties planted are HTX14, a pro-

cessing variety for tomato, and an improved onion (Open Pollinated Variety) variety known as capricio. These varieties are early maturing and have better post-harvest attributes such as longer shelf-lives, than the commonly planted varieties of tomato and onion, such as rodade tomato and Texas grano onion. The use of this technology has led to the following achievements:

- Above 95 percent germination of planted seeds
- Ninety-eight percent of transplanted seedlings were well established in the main field.
- Minimal shock and mechanical injury during transplanting resulting in excellent plant take off in the open field

### G. DRIP IRRIGATION SYSTEMS

PROFIT+ conducted training on product knowledge and use for drip irrigation system installation to the Farmer Advisors (FAs) in peri-urban Lusaka and EP. The training methodology comprised a theory and practical sessions. In attendance, were 58 FAs out of the 60 FAs from Chongwe, Katuba, Kafue, Chilanga, Katete, Chipata and Lundazi (distribution by District is in the table below).

**TABLE 4: DRIP IRRIGATION TRAINING PARTICIPATION**

No.	Category	Attendance		Total
		Males	Females	
1	Peri-urban Lusaka	14	8	22
2	Petauke	8	1	9
3	Katete	8	0	8
4	Chipata	8	3	11
5	Lundazi	7	1	8
<b>Total</b>		<b>45</b>	<b>13</b>	<b>58</b>

The objectives of the session were to train farmers on the following:

- Effective use of fertilizer in tomato and onion production
- Economic importance of targeted vegetable fertilizers in tomato and onion production
- Gross margins in tomato and onion production in relation to fertilizer use
- Water and nutrient management in tomato and onion production
- How to install a drip irrigation system
- How to construct a seedling production greenhouse
- Introduce the FFS methodology and its implementation
- Showcase the technologies the subsector is promoting

*Product Knowledge and use:  
Teaching horticulture small scale farmers how to use agrochemicals and fertilizers with the aim of increasing productivity, improve product quality and technology transfer*

The training was facilitated by Mr. Gene Phiri, the marketing manager for Zambian Fertilizer, who presented the economic importance and benefit of using granular fertilizers, among them are top veg 24 and top veg 32. Mr. Chola Kamaki, the director of Hygrotech, presented on the importance of foliar fertilizers, how to use them and also on pest and disease management in tomato and onion. A technician from Agronomics, the company that supplied the drip kits, trained the farmers on the components and the connections when installing the kit.

## 2. IR2: Expanded Markets and Trade

### A. FACILITATING MARKET ACCESS

PROFIT+ has strategically been developing partnerships with end markets to improve farmers' access to competitive prices and large sales. To this end the project held discussions with various high value traders in Lusaka and Chipata. The main points drawn from these discussions are shown in the schedule below:

**TABLE 5: DRAFT PARTNERSHIP DISCUSSIONS**

<b>NAME OF ORGANIZATION, AREAS OF OPERATION, PREFERRED CROP, VOLUME OF GRAIN REQUIRED (MT)</b>	<b>OPPORTUNITIES AND CHALLENGES FACED</b>
1. HIGH PROTEIN FOODS N/A Soy beans >8,000mt	Plans to start production of soy protein foods for sale to health institutions
2. EXPORT TRADING (ETG) Petauke, Katete Maize, soy beans, groundnuts 70,000mt	Has own grain storage facilities of up to 200 MT capacity. Has a fleet of trucks. Faces transportation costs challenges. Pays cash.
3. AGFRI Katete, Petauke Maize, soy beans, sunflower, groundnuts 200,000mt	Deals in grain management and buys grain the whole year round. Bought 100,000 MT of maize in 2013. Has ability to enter into buying contracts with farmers. Has bulk SMS messaging system. Pays cash.
4. ZDENAKIE Katete, Petauke Maize, soybeans 135,000mt	Has the largest grain storage capacity for private sector in Zambia with 23 warehouses @ 3, 500 MT/warehouse and has an export market for maize in Zimbabwe. They plan to set up two warehouses with a holding capacity of 300,000 MT, and construct two processing plants in in Katete and Sinda.
5. WFP Katete Groundnuts, maize, soybeans 18,000mt	Working with PROFIT+ on sustainable local sourcing for its school feeding program.
6. COMACO Chipata Groundnuts, maize soybeans 170,000mt	Practices conservation farming and is the largest domestic peanut butter producer. Last year COMACO bought 70 metric tons of soy beans and this year demand has increased due demand for their new high protein and nutritious product "Yamy" which has found its way through the supply chain in the leading supermarkets. COMACO is also opening a stock feed factory in Chipata this year whose main ingredients are soybeans and maize. COMCACE faces challenges with transport and labor
7. FEEDTEK N/A	New on the market. Has own transportation to collect aggregated crop, will pay cash and is willing to train farmers in feed formula-

Soybeans, groundnuts & maize 500,000mt	tion.
8. JUNGLE BEAT N/A Groundnuts 7,000mt	Jungle Beat processes peanut butter and roasted confectionary nuts for both the local and South African market. They are looking to break into the EU market with a different variety of peanuts in the next marketing season. Jungle Beat is also experimenting with an out-grower scheme for the upcoming season targeting 2,000 farmers
9. NWK AGRI SERVICE Country wide Maize, soybeans, groundnuts 170,000mt	NWK sources on mandate from both local and international companies that either trade or process the maize and soybeans
10. CARGILL Country wide Maize, soy 170,00mt	Cargill sources on mandate from both local and international companies that either trade or process the maize and soybeans. They have a large investment in maize on credit for the first time this year and have a large network of individual relationships with small farmers. Their biggest risks are due to moisture content and the potential for side selling.

It is envisioned that these deals will contribute to achieving several target indicators such as increased gross margins, increased incremental sales, and jobs created, and contribute to a number of smallholder farmers adopting new technologies.

#### A. SELL MORE FOR MORE (SMFM)

The project launched its **Sell More for More (SMFM)** training this quarter which will benefit up to 60 groups. SMFM is a training package aimed at building capacity to cooperatives and farmer organizations to sell large volumes of produce and at a better price. The package is divided into four modules, namely **membership, marketing, money and management**.

The SMFM package emphasizes the need for cooperatives/farmer organizations to have a good number of producers if large volumes are to be attained. It also stresses the need for collective marketing and aggregation. The training package helps farmers manage their money through good record keeping.

Two local sub-contractors (Kamono Solutions and Earthrow Finance) were selected out of 18 bids that were received. A total of 19 (11 males and eight females) trainers attended a two-day TOT session with the aim to:

- Explain why the project is training cooperatives/ organizations in SMFM
- Impart knowledge and skills to sub-contractors on how to conduct SMFM training to project partners (*cooperatives/organizations*)
- Have first-hand information in terms of facilitating a training (*each proposed trainer had a slot to facilitate*)

Once this training is rolled out to the intended beneficiaries in the four districts (Cooperatives, Farmer Groups and DWDAs), it is expected that the participating cooperatives, DWDAs AND DF will apply the knowledge in the upcoming marketing season and be able to market commodities in an efficient and profitable manner.

## B. GROSS MARGINS AND BREAKEVEN PRICING

The team has continued to sensitize farmers on the need to calculate gross margins and break even prices before selling. A total of 649 farmers (419 males and 230 females) underwent gross margin training during this quarter. The participants included DHFs and Field Advisors. After receiving training, they have begun rolling out the training to their LFs during their regular FFS interactions.

The knowledge gained from this training will benefit farmers in negotiating profitable prices at which to sell their commodities. Farmers learn how to cost the inputs that contribute to the production of the different value chains, and to establish the break-even price and therefore profitability. Selling at profitable prices will contribute to high values of incremental sales and number of USG supported short-term agricultural sector productivity or food security training. The following are the numbers of DHFs and FAs trained in calculating gross margins.

District	Males	Females	Total
Petauke	109	39	<b>148</b>
Katete	97	30	<b>127</b>
Chipata	96	92	<b>188</b>
Lundazi	103	61	<b>164</b>
Peri-urban Lusaka	14	8	<b>22</b>
<b>TOTAL</b>	419	230	<b>649</b>

## C. STRENGTHENING OF THE MARKET INFORMATION SYSTEM (MIS)

Based on the project's experience to date and understanding of the use of communication systems (local radio, word of mouth, billboards, information centers, cell phones), the project has decided to issue a RFP to compete the development of a sustainable market information system. Current providers in and outside of Zambia such as ESOKO, SOUKTEL and iDE Limalinks, and others, will be invited to compete. The components of the solicitation will be:

1. Use of mobile messaging for information dissemination and collection from farmers
2. Website for buyers and producers to share information in order locate and contact one another
3. Geo-located producer volumes by VC based on the aggregation study results and buyer information
4. Requirement to propose local partner and demonstrate long term sustainability and profitability

It is anticipated that by the end of next quarter partner (s) will be identified and work will begin. The scope of this program will depend on the cost, sustainability and feasibility of proposed solutions.

#### D. GROUNDNUT VALUE CHAIN AND ICRISAT

The **International Crops Research Institute for the Semi-Arid-Tropics (ICRISAT)** is a non-profit agricultural research organization headquartered in India, with several regional centers in Niger, Kenya and research stations, Mali and Zimbabwe. A meeting to discuss testing of a prototype groundnut shelling machine for smallholder groundnut farmers was held with ICRISAT. The objective of the meeting was to discuss possible ways to facilitate demonstration and sale of the shelling machines to various farming groups. ICRISAT will follow up with PROFIT+ once they obtain demonstration equipment which, once demonstrated, will entice farmers to adopt the technology. Specific action points developed during this meeting were:

- That ICRISAT should provide a prototype machine to be used as a testing model
- Identification needs to be made of an SME who would be willing to start fabricating the shelling machine once adopted by our farmers

The successful testing and eventual adoption of the shelling equipment would reduce labor incurred during shelling (particularly by women), reduce losses and ultimately increase income for farmers.

#### E. PROMOTE GROUP SELLING THROUGH BULKING/AGGREGATION

##### *Aggregation Study*

During the last quarter, in November 2013, the project commissioned a crop aggregation study, which is being conducted by IMANI Development Associates based in Malawi. Most of the data required to feed into the study has been collected and processed for the relevance of the study. The aggregation study will be completed next quarter once all the collected data is analyzed. The project will use this information to identify strategically located aggregation points that will serve as marketing points. The project will assess capacities of these aggregation centers and collaborate with private sector partners to improve the facilities such as weighing scales, and moisture meters. These facilities will facilitate trade given that currently, traders deduct two percent of the value of the commodity because they are not sure of the weight and moisture content. Equipment such as scales and moisture meters will bring confidence to the trade and increase value of sales.

#### F. HORTICULTURE MARKETING

##### *Value of Sales*

The project continues to facilitate marketing of tomatoes and onions. In support of this, the project has been collecting data on the sales of tomato and onion in the four districts of EP. The following are the variables the data is based on:

- Hectares under cultivation

- Labor cost for cultivated crop
- Input cost of the cultivated crop
- Total crop harvested
- Total crop sold
- Total sales of marketed crop

The market largely remains the open market with isolated cases of trade transactions being reported between Mozambique traders and Zambia farmers. Data thus far collected as at the close of the reporting period is as follows:

**TABLE 6: TOMATO AND ONION PRODUCTION AND SALES FIGURES FOR KATETE DISTRICT**

Variables	Tomato	Onion	Total
Value Sales Tomato ((ZMW)	3,313,708.33	945,930.56	4,259,638.89
Quantity of sales	369,300Boxes	3,338,000.00	3, 338, 000
Total Harvest	385,040 Boxes	3,474,600.00	3,474,600
Total Ha	600	261.5	861.5
Total Input costs	223,235.19	86,424.30	309,659.49

**Note:** *Tomato = measured in boxes (30kg)*  
*Onion = measured in 50kg bags (volume)*

A total of \$676,133.2 (\$525,985.4 of tomatoes and \$150,147.7 of onions) were traded in Katete district during this reporting period. During the same period, post-harvest losses at market points for tomato amounted to ZMW49,100 (USD 7,793.56) due to gluts and the lack of cold chain facilities at marketing points. Data for the other districts was being verified by time of reporting.

Overall, participating farmers have increased their incomes from the sale of tomatoes and onions following the various skills acquired through training by the project.

Mrs. Grace Phiri, a farmer advisor (FA) in Kafue District, 35 km from Lusaka obtained a ZMW 2,900 (US\$460) loan from Vision Fund after learning of their products and services from PROFIT+.. Mrs. Phiri who also received training from the project in tomato and onion production, invested the money in tomato production by purchasing 2000 hybrid indeterminate tomato seedlings, blended vegetable fertilizers, pesticides and fungicides. She planted the seedlings in her field practicing the agronomic knowledge gained from the trainings offered by PROFIT+ and has since started harvesting and is selling the tomatoes. She has thus far sold sixty-six (66) boxes of tomato at a farm gate price of ZMK100 (US\$16.39)/box. She sells the tomatoes to traders from Kafue tow. The total value for the produce sold thus far stands at ZMK 6,600 (US\$1,078). *“I have grown tomatoes for a long time but this is the first time I have grown such a healthy crop thanks to the knowledge gained from profit+”, she reflected.*

## G. COLLABORATION WITH THE SOUTH AFRICA TRADE HUB

The Southern Africa Trade Hub (SATH) and PROFIT+ hosted a four-day training workshop in aflatoxin removal while processing groundnuts at the processing plant for COMACO during the period under review in Chipata, Zambia. The SATH is a regional USAID project that aims to facilitate and enhance trade and competitiveness of the groundnut, maize and soybean value chains among countries in the southern African region. The Trade Hub is working in partnership

with the Global Peanut Product Processing and Marketing Team (GP3MT) to apply the low cost technology transfer in processing for the removal of aflatoxin contaminated nuts.

A total of 39 participants attended the training workshop drawn from district women associations, district farmer associations, ETG (Export Trading Group), Cropsolve, ADRA, COMACO and Kachere Development Project. The objectives of the training workshop were:

- To build an understanding of mycotoxins and their associated health and economic effects and management
- To equip groundnut farmers/processors with skills in post handling in a bid to manage mold and aflatoxin contamination
- To enhance the capacity of farmers/processors to process their groundnuts into safe and quality products

The theory session included important activities within the value chain from production, post-harvest handling and processing. It identified critical control points for aflatoxin contamination that included: Good Agricultural Practices (GAP), Good storage Practices (GSP), Good Hygienic Practices (GHP), and Good Manufacturing Practices (GMP). The practical involved a mild heat treatment of raw peanuts roasted for 45 to 55 minutes at about 140 degree Celsius (enough heat to eliminate the aflatoxin but not cook the groundnuts) and then manually removed the discolored and damaged kernels, an indication of aflatoxin-contamination. The vicam aflatest method of testing was used that measures aflatoxin in parts per billion (ppb). One of the samples tested prior to the heat treatment tested over 100 ppb. After the treatment and sorting, the samples were tested again for aflatoxin and it was found that contamination was below 50 ppb, levels which are acceptable and are not a health hazard to humans and animals.

At the end of the training the participants from farmer and women associations were urged to formulate a community training action plan that will be shared with their district committee for it to be incorporated into their annual implementation plan. The PROFIT+ aggregation and quality specialist in collaboration with COMACO staff will follow up on the action plans. The plans will assist in aggregation of the commodity during the marketing season.

### **3. IR3: Increase private sector investment in agriculture related activities**

#### **A. INCREASED PRIVATE SECTOR INVESTMENT**

There were three Concept Notes received from private partners for investment including two warehouse and processing facilities requiring \$1.2 million in investment, a \$200,000 investment in a peanut processing plant, and \$1.2 million investment in a malnutrition therapeutic food plant. The project continued to work with WFP on its \$1 million investment plan for a 500 MT warehouse in Katete.

## B. SILC ACTIVITIES

The project completed its recruitment and training of field agents for Katete and Petauke. During the quarter under review, 200 SILCs were formed with a total membership of 3,100 individual beneficiaries. The sex disaggregation currently stands at 72 percent women participation with 10 out of the 200 SILCs being exclusive women's groups. Both the recruitment and gender balance figures are tracking well against the 2013/2014 targets of 8,000 and 80 percent respectively. Thirty groups out of the 200 are actively saving with the rest expected to fully implement savings and lending practices during the next quarter.

The project has encouraged field agents to recruit SILC membership through the project structures such as the DHF structures and our partners, the DWAs and DFAs with the intention of making sure that SILC activities do not operate in isolation from other project activities. In the quarter, the project will begin to develop MIS and M&E data collection system through a global CRS platform as well as standardized data collection forms.



FIGURE 2: SILC FIELD AGENT EXPLAINING THE SILC METHODOLOGY TO A GROUP OF WOMEN

## C. MFI LINKAGES TO PROJECT BENEFICIARIES

During the period under review, the project introduced to FA groups and the Chipata-based female agro dealers to Vision Fund International (VFI) and Micro Credit Foundation (MCF), respectively. VFI was introduced to the Mnoro FA and Sairi FA farmer groups. A total of 73 farmers attended the initial meeting. VFI explained its terms and conditions for and gave the groups an assignment to form sub groups of five to ten people. These self-selecting groups would then have to provide copies of their national IDs and come up with ZMW 260 pre-loan fee for insurance and application processing. Each farmer would initially be eligible for a loan of up to ZMW 2,000 but could graduate through successive loan repayments to loan amounts of up to ZMW 15,000. The loan tenures are up to seven months with the first months attracting only interest amount repayments while months four through to seven attract both principle and interest repayments. The interest rate offered to these farmers was approximately seven percent.

To date, four groups (two from each FA group) has satisfied VFI loan application requirements and should make full applications within the next quarter. VFI committed to a four-day turnaround for all duly executed loan applications. The project will closely monitor this first round of applications to maintain best practices for the benefit of the next groups that will be introduced to VFI.

MCF met seven female agro dealers in Chipata and both the agro dealers and the MCF CEO were very encouraged by the discussion. MCF indicated that they have a loan graduation scheme that grows from an initial ZMW 800 per agro dealer up to ZMW 20,000 maximum exposure per client based on credit history. Apart from providing loans, MCF also offers BDS, group formation/management training and encourages savings. Most of the agro dealers indicated that they had viable business plans they were willing to share with MCF. MCF has indicated to the project that it requires a minimal level of TA in structuring ag finance products. As such, a follow up meeting with MCF is scheduled for third week of April to determine what role and next steps the three parties need to play to take the linkage to its next stage.

#### **D. CONCEPT NOTES TO SUPPORT PRIVATE SECTOR INVESTMENT**

The project engaged ZDENAKIE during the data collection exercise of the aggregation study with end markets actors. ZDENAKIE has indicated its intention to set up warehousing facilities in EP, and intends to submit a concept note with the hope to access some IIP funds to construct two multipurpose facilities in Nyimba and Katete with individual warehouse capacities of three thousand metric tons, maize, soy and groundnut processing as a second phase of investment.

The project also continued to engage Every Child Fed (ECF) on its plans to establish a \$1.3 million facility that will produce Ready to Use Therapeutic Food (RUTF) used in treating chronic malnutrition. Peanut paste and sunflower/soya oils form the base ingredients for RUTFs and ECF has estimated that it will need about 50 MT of peanut paste and 50 MT of oil to run at full capacity. The company plans to either directly (or via proxy) source all its raw material from EP. ECF will use other donor (non-USG) funds as leverage.

The project revived discussions with Lusanjo, a company that received a ZMW 500,000 loan from the Citizens Economic Empowerment Commission to establish a groundnut processing facility in Petauke. The facility has a processing capacity of 200kg/hr. The numbers of farmers who will benefit from this investment in the first year is conservatively estimated at 4,000.

#### **E. WORLD FOOD PROGRAM (WFP) FARMER SERVICE CENTER WAREHOUSE IN KATETE**

During the period under review, the project received a \$30,000 proposal from WFP for developing facilities around a warehouse. The warehouse facility would serve as a hub for agribusinesses to exchange services and market commodities through linkages to private sector actors. The warehouse is located in Kasamanda and has a capacity to store up to 500 MT of grain commodity. The activity will benefit 12,000 smallholder farmers and seven community-based micro enterprises. WFP and their implementing partner ADRA has asked the project to participate in the following ways:

- Provide crop production TA to the farmers who are expected to sell to this warehouse

- Provide both TA and financial assistance to the entrepreneurs who will manage the agro-dealer and oil pressing business
- Fund the development of the agribusiness model by paying a consultant who will work as a mentor to the local business persons associated with the warehouse
- Identify and build capacity of other processors within the catchment area who can build the commercial value of the center within the area (such as other oil expellers within Katete). This will further justify the involvement of large off takers of crude oil and sunflower cake.
- Improve access to financial services through revolving seed funds, introduction of MFI activities and introduction of SILC activities

#### F. AFLASAFE PILOT IN GROUNDNUTS

The project distributed all the Aflasafe it had procured from IITA to implementing partners WFP, COMACO, ETG and the DWAs from Katete, Petauke and Chipata. Representatives from the same organizations (except Petauke DWA) attended the application and field management ToT conducted by IITA for roll out to their farmer members. In total 9 MT was provided under in-kind grants to the trial partners with potential for application to 900 hectare of land and 3,600 farmers.

The Aflasafe shipment was received in the first week of January and was distributed to partners within three days of receipt. In some parts of EP, farmers planted their crop early and could therefore not participate in the trial as expected. Complete field reports on the trials will be compiled by IITA and partner organizations to indicate how many farmers actually participated and the total land area on which testing was conducted and culminate into an efficacy report. Any remaining Aflasafe will be applied next season. Initial results are expected at the end of the harvest period and a second batch will be available midway through the marketing season. The key objectives of the trial is to prove that there is a soil-based and environmentally friendly method for producing high quality peanuts that can attract “premium” pricing in both local and export markets and therefore entice ETG to establish an Aflasafe manufacturing plant in Zambia.

#### G. LESSONS LEARNED AND SUCCESSES

**SILC activities:** The recruitment process for SILC field agents was not entirely smooth and the project had to take second dips into the community to find suitable agents. The strong participation of women in SILC activities is very encouraging and provides an opportunity for women participation in other group activities such as access to expanded markets and linkage to other financial services.

**Aflasafe:** The delivery times for the Aflasafe and the lateness of confirmed interest in trial participation was not enough time to conduct product management protocol training and application monitoring. In some cases it meant a loss of opportunity to test on the scale the project had antic-

ipated. Initial reports from Katete DWA and WFP indicate we will achieve significant scale and good test results from their affiliate partners.

MFI linkages: The understanding of how MFIs provide products and services is still very low and the project has to invest more time and effort conducting sensitization activities. The efforts made thus far through the product training given to Lusaka and Chipata horticulture FAs has generated a lot of interest and the team plans to continue building this momentum while at the same time helping MFIs understand and engage our beneficiaries better.

## **4. ACCESS TO FINANCE**

### **A. HORTICULTURE SMALL SCALE FARMERS INTRODUCED TO AN MFI**

During the period under review; meetings between horticulture small scale farmers under the Farmer Advisor (FA) model and Vision Fund-Zambia were facilitated by the project. Vision Fund – Zambia is an MFI whose main objective is to offer affordable and low interest loans to rural and urban households engaged in entrepreneurial activities. A member of the World Vision International, it is committed in improving the livelihoods of vulnerable households in rural parts of EP.

Sairi under Mastrid Jere – FA and Mnoro 1 under Sam Nkhoma – FA were the communities visited by Vision Fund staff accompanied by the Field Facilitator of Chipata District. The two communities are within a radius of 16 to 25 kms from Chipata main business center. The objectives of the visit to the two communities were to create awareness and sensitize the farmers on:

- Insight about what vision fund is all about
- Sustainable linkages of access to loans.
- Terms and conditions of accessing loans, interest rates and pay -back period.

Vision Fund elaborated their selection criterion, the core being that one needed to be an already established entrepreneur such as a tomato or onion producer and they encouraged group financing between five and 10 farmers headed by an elected group leader. An initial 94 farmers participated in these first meetings.

Vision Fund took this opportunity to start the selection process by asking the FAs to write a list of farmers who are honest, trusted and willing to access and payback loans accompanied with their photocopies of NRC's. It was indicated that Vision Fund would give initial loans of K 2000 (USD370) per person in a group to be paid back in six months if they met the requirements. Under the FBA model in the two communities, the potential value of loans accessed by horticulture small scale farmers at 80 percent will be ZMW 659,200 (or \$119,854.55) within six months.

As individual groups and personnel portfolios grow and trust is developed between the two parties, loan amounts accessed can increase between ZMW 5,000 and ZMW 10, 000. Loans between ZMW 750 to ZMW 2,000 (USD139 to 370) can be accessed by farmers once they meet the criterion. The attendance from the two communities was as follows:

**TABLE 7: ATTENDANCE AT VISION FUND MEETINGS**

S/N	FA NAME	CAMP	Male	FEMALE	TOTAL
1.	Mastrid Jere	SAIRI	35	19	54
2.	Sam Nkhoma	Mnorro I	30	6	36
Total			65	25	90

## B. PPP INCREMENTAL SALES DEALS

As part of the data collection exercise for the aggregation study and preparations for this season’s marketing activities, the team engaged key end market actors to explore potential areas of collaboration. Three significant opportunities were realized from these discussions as described below.

**AFGRI Grain Sourcing and Tractor Lease Scheme:** AFGRI indicated to project staff that they would be in the market for about 200,000 MT of grain (a combination of maize, soybean, and groundnut). The market linkage has trade value of about \$700,000 with the potential to benefit 20,000 farmers. The project agreed to work with AFGRI to generate more awareness about AFGRI’s sourcing strategy with aggregating groups. AFGRI has also made their bulk SMS weekly price service available to PROFIT + affiliated farmers.

Secondly, AFGRI has a “Tractor for Maize” mechanization lease scheme that essentially requires farmers to put down 30 percent of the value of a tractor and repay over a three year period in the form of maize or another AFGRI traded crop. The project is working with AFGRI to promote this scheme as it adds value to farmers’ livelihoods through increased asset ownership, better adoption of land tillage methods like ripping, alternative IGA, efficient labor management, and a route to a guaranteed market through the buy-back scheme.

**COMACO Trade Finance:** COAMCO indicated it needed a trade line of credit for the upcoming marketing season. The credit sought would be used to purchase commodity from approximately 80,000 small scale farmers throughout the eastern province. The project has reached out to partner financial institutions to explore guarantee and credit insurance options to support COMACO’s applications. Discussions are still in progress with respective partner FSPs.

**Cargill Grain Sourcing:** The project and Cargill agreed to work through the project’s aggregation center activities to help Cargill source approximately 45,000 MT of maize and 60,000 MT targeted for this season. Approximately 25 percent of these volumes are likely to be sourced from EP and the project is targeting to contribute to at least 20 percent of EP volumes through project supported aggregators.

### *Significant Impact*

The formation of the SILC groups has led to over 3,000 farmers receiving basic financial literacy training and about 600 accessing savings services through the SILC groups. The other beneficiaries will begin saving once they have completed the group formation and management training.

Seventy-three farmers now understand what financial services are available from commercial financial services organizations and the process for applying for credit including default and risk management from the FI's point of view. The farmers reported an increased interest in credit and have adopted more service seeking behavior. The project's expectation is that the initial 73 farmers will serve as role models for other farmers and demonstrate the benefit of not accessing credit and sound business management.

### *Private sector partnerships and collaborations*

The project met with SARO Agro Industrial Limited to explore how their product agents could be linked our agro dealers as well as work on extending their NATSAVE funded input credit scheme to EP smallholders. SARO was also invited to attend our FFS days and arrange equipment demos through our demo host farmer structures. Follow up meeting will be held to work on MoUs and field level activity scheduling.

The project also developed a working relationship with African Trade Insurance Agency (ATI), which provides a number of insurance services including trade and credit guarantees for local organizations that seek balance sheet support or buyer default protection on international trade transactions.

**ZDENAKIE Storage Infrastructure Construction:** The project is also working with ZDENAKIE in its efforts to obtain capital expenditure finance for the construction of a USD 11m silo complex. The complex would have a grain holding capacity of about 100,000 MT and would supplement ZDENAKIE's existing infrastructure which it uses to store grains for both local and international commodity traders. The banks role has been to help ZDENAKIE structure bankable proposals as well as involve partner FSPs to provide guarantees and credit insurance support to ZDENAKIE.

### *Private sector partnerships and collaborations*

The project met with SARO Agro Industrial Limited to explore how their product agents could be linked our agro dealers as well as work on extending their NATSAVE funded input credit scheme to Eastern Province small scale farmers. SARO was also invited to attend our farmer field school days and arrange equipment demos through our demo host farmer structures. Follow up meeting will be held to work on MoUs and field level activity scheduling.

The project also developed a working relationship with African Trade Insurance Agency or ATI. ATI provides a number of insurance services including trade and credit guarantees for local or-

ganizations that seek balance sheet support or buyer default protection on international trade transactions.

## 5. Monitoring and Evaluation

The Monitoring and Evaluation (M&E) unit has continued to provide guidance on indicator tracking and reviewed targets against achievement for quarter one of FY14. The project staff now clearly links the activities and strategies to project indicators. To mitigate double counting and duplication of efforts the M&E staff has continued collaborating with all stakeholders and Feed the Future projects.

### A. CROP PERFORMANCE ASSESSMENT

The project conducted a crop performance assessment to establish technology adoption among smallholder farmers as well as to estimate production by value chain as influenced by technologies. Parameters assessed included crop stand, and technology application by the DHFs, estimated production by value chain. The graph below shows crop-stand as a measure of crop performance by value chain.

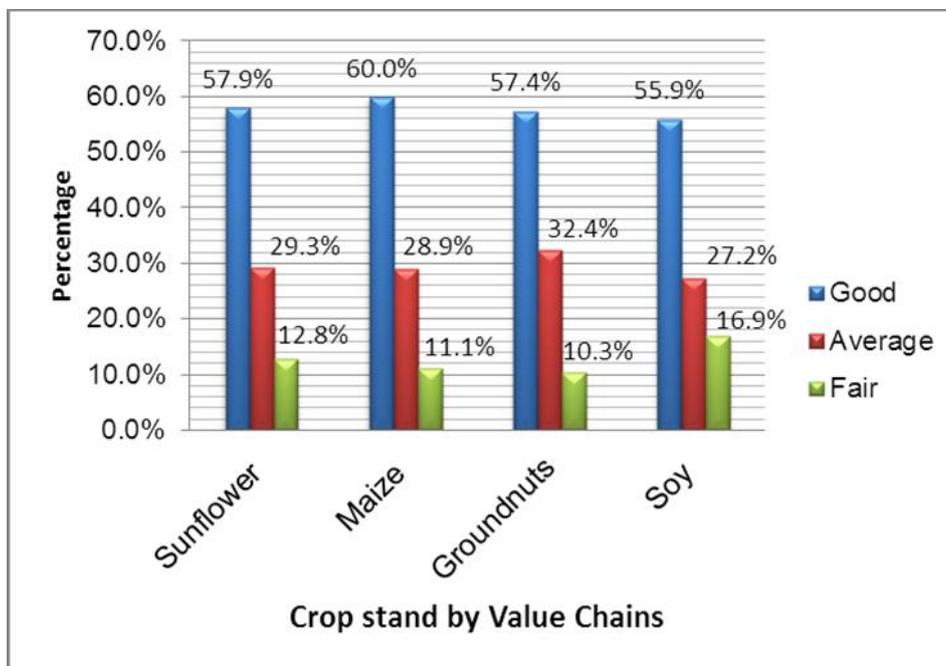
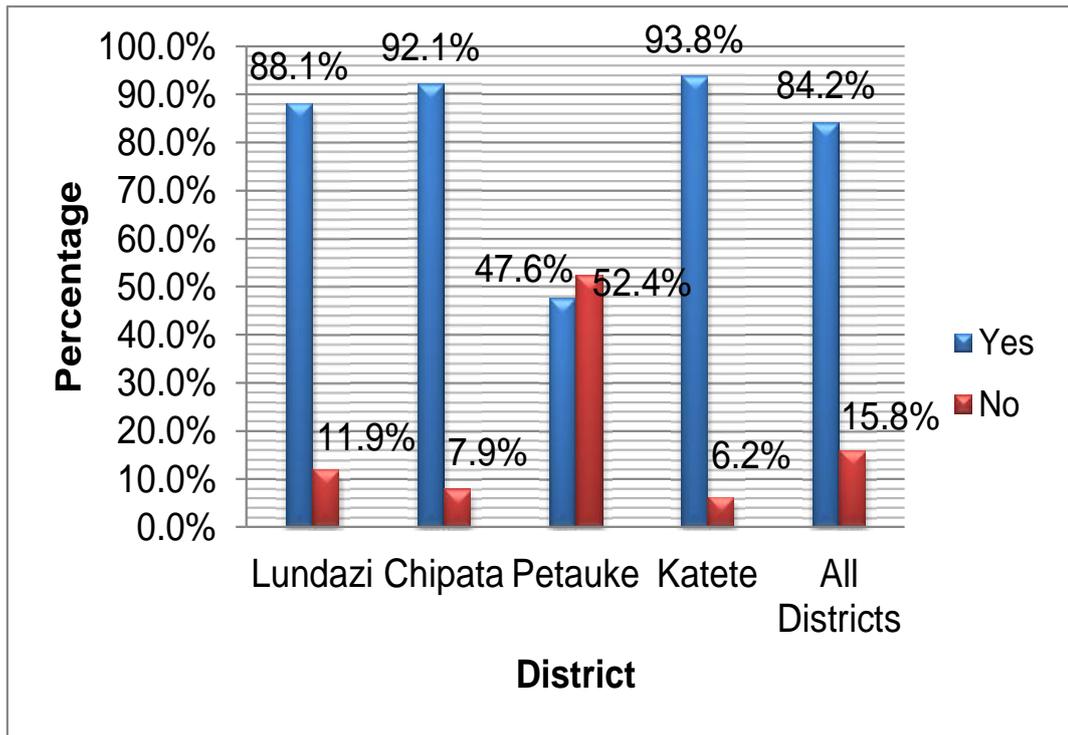


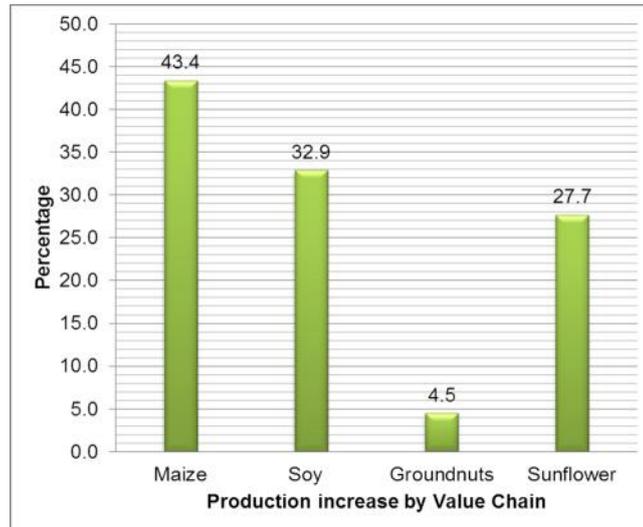
FIGURE 3: CROP STAND BY VALUE CHAIN

**Technology adoption:** The DHF model seems to be yielding results. So far 8,140 smallholders have received training in various technologies. Overall 74 percent reported to have received training in at least one technology. The commonly adopted technologies in sunflower, groundnut, soybean and maize are crop rotation, timely weeding, and early planting. In Maize, use of improved seed and of fertilizer had a fairly high percentage. The graph below shows percentage adoption by district of the project-introduced technologies.



**FIGURE 4: PERCENT OF THE DEMO HOST FARMERS THAT APPLIED THE INPUTS RECEIVED FROM THE PROJECT**

The survey established a comparison between demonstration plots on which technologies promoted by the project were applied and plots which maintained the farmer's traditional way of growing the different value chains. The production increase varies from crop to crop. Maize recorded the highest increase of 43.4 percent and the least was in groundnuts 4.4 percent. Soy and sunflower had an estimated increase of 32.9 and 27.7 percent respectively.



**FIGURE 5: PRODUCTION INCREASE BY VALUE CHAIN**

**B. MICROENTERPRISE RESULTS REPORTING (MRR)**

The project was selected to be part of USAID’s report on Microenterprise Results Reporting. The data call is used to identify and quantify USAID’s funding that is obligated to support microenterprise and supports the creation of an online, searchable database of all microenterprise support. In this regard, 43 cooperatives, 123 agro dealers and a total of 133 processors were identified. These entities have a potential to create a total of 247 permanent jobs which can be captured in the FY14 reporting period.

**6. Environmental compliance**

The purpose of the environmental stewardship and climate change activities are two-fold. The first is to ensure that PROFIT+ integrates natural resource management and climate change adaptation into the agricultural practices of the program through conservation agriculture, better soil and water management, and by supporting producer groups and communities in responsible stewardship of common resources. The second purpose is to ensure that PROFIT+ activities are conducted in an environmentally sustainable way and in compliance with USAID and ZEMA environmental procedures and regulations. Along these lines, in the period under review, the project continued to facilitate implementation of its activities in a manner that enhances environmental sustainability while ensuring enhanced capacity for the beneficiaries and partners to uphold environmental integrity. In this regard the project has continued to strive towards ensuring that all activities with a negative determination follow provisions in the approved EMMP such that the program goal can be achieved in an environmentally sustainable manner.

## A. ROUTINE FIELD MONITORING

Routine field monitoring by project field reveals that:

- All the demo sites visited were established on existing farms thus reducing the impacts associated with clearing of land which include vegetation cover loss, habitat change and biodiversity loss.
- The improved technologies promoted by the project have been applied on all the demo sites. These environmentally sustainable agricultural conservation techniques/technologies demonstrated at the farms are:
  - maintenance of soil covers (crop residues and vegetative matters)
  - promoting minimum tillage through early land preparation using the magoye ripper or Chaka hoe
  - promotion of crop rotation with food legumes
  - promotion of crop diversification
  - use of certified or improved seed
  - use of fertilizer
  - use of crop protection products (pesticides)
  - promotion of correct planting techniques
  - planting with the first good rains, correct seed rate and at correct depth

## B. ENVIRONMENTAL SUSTAINABILITY SUPPORT TO GRANT APPLICANTS

The Environmental Compliance Specialist provided technical support to the grants applicants in the identification of potential adverse impacts associated with the proposals and the list of potentially required mitigation measures. In this regard, Katete DWA, Chipata DWA, Mitengo Women and COMACO have been assisted in how to understand the USAID environmental Procedures vis-à-vis the environmental screening form and the Environmental Mitigation and Monitoring Plan (EMMP). It is expected that the applicants will now be able to document the situation on the ground with appropriate mitigation measures for the identified potential negative impacts.

In addition, the environmental documents and the whole screening process will allow for the determination of whether there any activities in the grant applications that may have a Positive Determination which may not be supported by the project.

## C. HORTICULTURE DISEASE MANAGEMENT WORKSHOP

The project is working with private sector in the delivery of horticultural training to smallholder farmers to enable them understand the benefits of buying and utilizing quality inputs and employing improved technologies to maximize output. The emphasis of the training was capacity building for correct problem diagnosis, continuing through selection of appropriate pesticide products and correct application procedure and ends with observance of the waiting period between pesticide application and crop harvesting.

**TABLE 8: ATTENDANCE DURING THIS TRAINING IN LUSAKA**

No.	Category	Attendance		Total
		Males	Females	
1	FAs	14	8	22
2	Field Facilitators	3	1	4
	<b>TOTALS</b>	<b>17</b>	<b>9</b>	<b>26</b>

#### **D. ENVIRONMENTAL MITIGATION TRAININGS**

Preparations for the training of FAs and DHFs in integrated pest management (IPM), environmental mitigation and monitoring plan (EMMP) and safer use of pesticides have now reached the stage of awarding a contract to a consultant. The subsequent training will equip the FA's and the DHF in implementing the EMMP. The practical lessons exposed the participants to a seven step process of removing groundnut contaminated with aflatoxin. The elaborate laborious process involved in the removal of aflatoxin-contaminated groundnuts clearly drove home the message that it is better to engage in precautions at all the levels instead of leaving it at the end.

##### *Environmental compliance sensitization at farmer field days*

During the farmer field days, the smallholder farmers have received information on the importance of observing environmental sustainability in their agricultural activities. The farmers were sensitized on impacts such as vegetation cover loss soil erosion, and decreased soil fertility. They were also encouraged to look at conservation farming as good practice for managing water in a climate change situation.

The 426 farmers who were sensitized about environmental compliance during the field days in Chipata have expressed happiness with the skills on how to come up and utilize an environmental mitigation and monitoring plan. Some farmers were hearing about the EMMP for the first time and expressed gratitude to the project for the field days that have enabled them to come across such valuable messages.

## **7. GENDER**

#### **A. VALIDATING DATA FROM PARTNER TRAINERS**

During the period under review, the gender sector validated data from the six partners that trained smallholder farmers in gender mainstreaming, women empowerment and leadership skills in the four districts of EP. PROFIT+ reached a total of 38, 916 (13,493 males and 25,493 females) in all the four districts of Lundazi, Chipata, Katete and Petauke. The sensitized smallholder farmers are taking part in farmer field schools, field days and other project activities. This will increase women participation in the project activities by 64 percent.

**TABLE 9: DISTRICT TRAINING ROLLOUT IN LEADERSHIP & GENDER MAINSTREAMING**

Partner	District	Attendance				
		Females	Males	Total	Female %	Male %
Chipata DWDA	Chipata	5,174	2,101	7,275	71%	29%
Petauke DWDA	Petauke	5,630	2,755	8,385	67%	33%
Lundazi DWDA	Lundazi	5,695	3,544	9,239	62%	38%
Katete DWDA	Katete	6,184	3,081	9,265	67%	33%
Mfumbeni DA	Chipata	1,020	710	1,730	59%	41%
Kachere DP	Petauke	1,790	1,232	3,022	59%	41%
<b>TOTALS</b>		<b>25,493</b>	<b>13,423</b>	<b>38,916</b>	<b>64%</b>	<b>36%</b>

### B. THE GROUNDNUT OUT-GROWER SCHEME FOR DWDAS

To ensure that women remain active actors in the groundnut value chain the Gender team procured five tons of improved groundnut seed (MGV4) and granted them to three DWDAs (Katete, Chipata and Petauke) representing 500 farmers for their out-grower scheme. The was given to the farmers who will pay back 100 kg of unshelled groundnuts at harvest time, and the extra will also be purchased by the respective DWDAs for their cooking oil production and trading.

#### *Aflasafe Trials*

PROFIT+ is participating in the ZARI Aflasafe trial project targeting 500 smallholder farmers. Seventeen growers were trained in the application of Aflasafe. It is envisioned that the participating farmers in the trial will produce Aflatoxin-free groundnuts that can meet international standards for aflatoxin levels. The table below shows.

**TABLE 10: NAMES AND AMOUNT OF AFLASAFE APPLIED TO FIELDS**

S/N	Name of Partner	Quantity of Groundnuts Received	Quantity of Aflasafe Received	# of Targeted Beneficiaries Reached
1	Petauke DWDA	1mt	1mt	100 Small holder farmers
2	Katete DWDA	2mt	2mt	200 Small holder farmers
3	Chipata DWDA	2mt	2mt	200 Small holder farmers
	<b>Totals</b>	<b>5mt</b>	<b>5mt</b>	<b>500 small holder farmers</b>

### C. COLLABORATION WITH PARTNERS ON ISSUES OF NUTRITION, HIV/AIDS

The project has sought collaboration with the Zambia-led Prevention Initiative (ZPI), the MAWA project and CARE in integrating HIV/AIDS prevention and nutrition activities in the

program interventions. At a meeting organized by CARE and facilitated by ZPI, there were 33 (15 females and 18 males) participants drawn from a wider range of like-minded organizations, including government departments (health, local government, agriculture, community development, mother and child health, nutrition commission and NGOs such as MAWA, Orange Potato, World Vision and the PROFIT+ project). The aim of the meeting was to share information on how the different organizations are implementing nutrition-based programs which will inform CARE's new strategies.

#### D. COUPLE GENDER SENSITIZATION & MAINSTREAMING FARMER ADVISORS

In an effort to mainstream gender and increase female empowerment through horticulture value chains the gender sector convened a couples-focused gender sensitization exercise in Palabana at the Farmer Advisor's home for five couples. The participants were drawn from households of five lead farmers attached to the demo plot. The exercises focused on topics such as 'activity profile', 'triple role framework' and access and control over resources and benefits by women and men. The couples training helped each gender to understand each other's workloads in the household, and to begin to appreciate roles that spouses are taking in the project. Spouses indicated that they will now be interested and can participate in activities that their spouses are working on the project. For example, if a spouse is a lead farmer, the other starts to pay attention to the training conducted.



**FIGURE 6: MARTHA MAUNDU, FARMER ADVISOR'S FIELD AND DAISY MASEKO, LEAD FARMER, PRESENTING COUPLES GENDER SENSITIZATION**

#### E. THE INTERNATIONAL WOMEN'S DAY COMMEMORATION

In order to build alliances the gender team participated in the International Women's Day Commemoration at Saili Primary School – Chipata District of Zambia. The 2014 International Women's Day was commemorated under the theme *“Inspiring Change: Celebrating God's Favor on*

**50 Years of Women’s Excellent Achievements.”** The event was organized by partner Chipata District Women’s Development Association (CDWDA) with its twelve affiliated area associations. The total number of people that participated was 4,000 of which 3,500 were women and 500 were men. People came from organizations such as women groups, civic leaders, politicians and smallholder farmers. The event started with a march during which a number of solidarity songs were sung. The people were also entertained with cultural dances such as Chitelele and Ngoma.



**FIGURE 7: IWD MARCH PAST AT SAILI IN CHIPATA, ZAMBIA**

Among the attendees were the Area Chief, the Area Member of Parliament, Honorable Charles Amadoda Zulu, village headpersons, teachers and other invited community members. The area member of parliament and other leaders that spoke shared with the people important roles that women play in society and some development projects that government and private sector are implementing in rural communities. They emphasized that the success of any project depended upon the cooperation of women and men in the communities. Women and men are equal partners in development and there is need to recognize and value the various contributions that women make in society.

#### **F. LESSONS LEARNED**

In order to increase female participation in the value chains it was recommended that the lead farmer level should target couples (households). This will also increase the number of beneficiaries to benefit from USG funding. The attendance at FFS could also target couples as farming families.

## **IV. BEHAVIOR CHANGE COMMUNICATIONS**

The PROFIT+ BCC Strategy was completed with all input incorporated and consensus to modify the finance-related behavior. Danya planned and implemented the first BCC campaign assess-

ment. Findings will support and contribute to project PMP indicator for number of farmers adopting new technology.

- Staff administered 334 household questionnaires in the four Eastern Province districts (average approximately 85/district as per design).
- Initial findings show despite lower than expected reach, those exposed to BCC messages were reporting positive impact of messages on behavior.
- Collaboration with CRS on integrating SILCs and similar village savings and loans into BCC strategy is notable. PROFIT+ contributed to clearer the pro-poor strategy and will work with CRS on finance-related activities per the revised strategy.

The final BCC report on this assessment will be shared in the next quarter.

## V. LESSONS LEARNED

**Extension Services:** CEOs in Petauke and Katete seem to be more active and are providing guidance to the FAs and the farmers at large. The CEOs played a critical role in project community awareness meetings, recruitment of FA, lead farmers and smallholder farmers.

**Environmental Compliance:** By the observance of the mitigation measures contained in the EMMP and continued building capacity for beneficiaries in coming up with site specific EMMPs, the program is enhancing the sustainability outlook of the activities that are being promoted. The success of the strategy hinges on repeated messages and the self-monitoring mechanism that is being encouraged for all activities through the preparation and utilization of site-specific EMMPs.

**SILC:** The recruitment process for SILC field agents was not entirely smooth and the project had to take second dips into the community to find suitable agents. The strong participation of women in SILC activities is very encouraging provides an opportunity for women participation in other group activities such as access to expanded markets and linkage to other financial services.

**Aflasafe Trials:** The delivery times for the Aflasafe and the lateness of confirmed interest in trial participation did not provide enough time to conduct product management protocol training and application monitoring. In some cases it meant a loss of opportunity to test on the scale the project had anticipated. Initial reports from Katete DWA and WFP indicate we will get significant scale and good test results from their affiliate partners.

**MFI Linkages:** The understanding of how MFIs provide products and services is still very low and the project has to invest more time and effort conducting sensitization activities. The efforts made thus far through the product training given to Lusaka and Chipata horticulture FAs has generated a lot of interest and the sector plans to continue building this momentum while at the same time helping MFIs understand and engage our beneficiaries better.

ANNEX 1.

<b>Activities for quarter Three 2014</b>				
<b>Activity</b>	<b>Location/ Venue</b>	<b>Lead person(s)</b>	<b>Participants/ collaborators</b>	<b>Proposed dates</b>
<b>Horticulture</b>				
Integrated Pest Management and Technical Sprayer Services training	Eastern Province and Peri-urban Lusaka	Emmanuel and Samson Lungu	Croplife, District Facilitators and FAs	April
Facilitating and strengthening PPP	Eastern Province and Peri-urban Lusaka	Emmanuel	Rivonia, Starke Ayres, iDE, Croplife, Hygro-tech, Zamseed, SARO	April - June
Horticulture post-harvesting technology training	Eastern Province and Peri-urban Lusaka	Emmanuel and Alfred	CASH, Field Facilitators & FAs	April -May
Horticulture post-harvesting technology BCC campaign	Eastern Province and Peri-urban Lusaka	Emmanuel and Steve	FAs	April - June
Facilitating access to loans by horticulture small scale farmers	Eastern Province and Peri-urban Lusaka	Emmanuel and Sam Gondwe	Vision Fund, Micro Bankers Trust, SARO	April - June
Identification of new horticulture production areas and Farmer Advisors	Eastern Province and Peri-urban Lusaka	Emmanuel and Alfred	FAs, MAL	April -June

<b>Activity</b>	<b>Location/ Venue</b>	<b>Lead person(s)</b>	<b>Participants/ collaborators</b>	<b>Proposed dates</b>
Identification and scanning of horticulture markets	Eastern Province and Peri-urban Lusaka	Emmanuel and Moses Mbawo	FAs, Field Facilitator and Marketing Team	April -June
Solicit and facilitate call for proposals on horticulture	Eastern Province and Peri-urban Lusaka	Emmanuel and Enos	Partners, Raymond, Field Facilitators	April-June
<b>Environment</b>				
Conduct IPM, SSP and EMMP training	Chipata	Sam	Alfred, Botany, Emmanuel, Sinyinda	On going
Monitoring of FAs	Chongwe Katuba Kafue	Emmanuel	FAs	On going
Technical Training for Processors in Environmental compliance	TBD	Moses	Processors	April
Post-harvest: aflatoxin awareness & mitigation Training	TBD	Alfred	Smallholder farmers	May
Integrated Soil fertility Management (ISFM)	TBD	Alfred	Smallholder farmers	May
Business skills & product knowledge for Agro dealers	TBD	Alfred	Input suppliers	May
<b>Monitoring and Evaluation</b>				

Scope of work for outcome survey	Capture annual results for outcome Indicators	Moses Musikanga	All Sector Heads	June
Collect and process Demo site Farmer Field School Registers	Collect 3,750 Copies from the field	Jimmy and Mary	Botany, Moses and Field facilitators	June
<b>Activity</b>	<b>Location/ Venue</b>	<b>Lead person(s)</b>	<b>Participants/ collaborators</b>	<b>Proposed dates</b>
Updating of the database	Lusaka , Katete, Lundazi, Petauke and Chipata	Jimmy and Mary	Data entry Clerks	June
Review of the project database	Chipata/Lusaka	Jimmy/ Mary	Data entry Clerks	June
Partners' (DWAs, CRS-SILC and others) Meeting	Review of indicators and progress	Moses Musikanga	Moses Musikanga	June
<b>Grants</b>				
Facilitate Grants Reviews	Lusaka	Enos	All Sector Heads	
Facilitate Grants for Gender Training	Lusaka	Enos	Vincent and Betty	
Facilitate Grants for post-Harvest Training	Lusaka	Enos	Emmanuel	
Finalize Grants with Katete DWA and Steward Globes	Lusaka	Enos	Raymond	
<b>Accounts and Finance</b>				
Updating of the Fixed asset	Chipata, Katete,	Kelly	Nasida and Alfred	June

Register	Lundazi, Petauke			
Backstopping Field Offices	Chipata, Katete, Lundazi, Petauke	Kelly	Regional Finance Officer , Nasinda and Alfred	June
Preparations for the Internal Audit	Lusaka	Kelly	Nasinda and Alfred	June
<b>Gender</b>				
Gender Leadership and Governance Rollout	Peri-Urban Lusaka	Vincent	Betty and Section Heads	May, 2014
Mainstreaming Gender in Market Interventions	All Districts	Vincent	Moses Mbawo	June
<b>Activity</b>	<b>Location/ Venue</b>	<b>Lead person(s)</b>	<b>Participants/ collaborators</b>	<b>Proposed dates</b>
<b>Agriculture Finance</b>				
Review the aggregation study report to solicit more investment in storage and processing services/infrastructure linked to our farmer base	Lusaka	Sam G	All sector Heads	June
Finalize Deals with ZANACO, NATSAVE, SARO, AFGRI and ZNFU on access to finance interventions (in some cases building on SMFM)	Lusaka	Sam G	CoP	June
Monitor the implementation of activities by WFP	Lusaka	Sam G	CoP	June

based on the MoU. (i.e the Kasamanda business model)				
Review Aflasafe trial results and determine if there is an investment case for ETG to consider with or without project support	Lusaka	Sam G	Sector heads	
<b>Production</b>				
Finalize the Crop Assessment Report	Chipata	Alfred	Production Team	May
Estimate of yield on the demonstration Plots	All Districts	Alfred	Field facilitators , Sinyinda and Anita	May
Link agro dealers to MFIs	Chipata,Petauke, Katete and Lundazi	Alfred	Sam.G,Field facilitators , Sinyinda and Anita	June
Linkage of Chipata District Agro dealers to Community Agro dealers	Chiapata	Alfred	Alex Hasingo	June
<b>Marketing</b>				
<b>Activity</b>	<b>Location/ Venue</b>	<b>Lead person(s)</b>	<b>Participants/ collaborators</b>	<b>Proposed dates</b>
Finalize the aggregation study	Chipata	Moses Mbawo	CoP	May
Put in place market information systems	All districts	Moses Mbawo	Marketing Team	June
Continue rollout the Sale More For More Training	All Districts	Moses Mbawo	Marketing Team	June

Initiate collection the sales data for the six Value Chains	All Districts	Moses Mbawo	Marketing Team	June
Link Smallholder Farmers to Viable markets	All Districts	Moses Mbawo	Marketing Team	June
<b>Procurement</b>				
Procure Project Vehicle	Lusaka	Emmanuel Silwimba	CoP, Ops and Finance Manager	June
<b>Human Resource and Administration</b>				
Finalize the Hire of the DCoP, Field Facilitator for Peri- Urban Lusaka, SILC Facilitator and Office Assistant for Petauke	Lusaka	COP	Respective sector Heads	June