RESTORING EFFICIENCY TO AGRICULTURE PRODUCTION (REAP) ACTIVITY IN GEORGIA

Quarterly Progress Report Project Year 3
January 01, 2016 – March 31, 2016

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Acronyms

APMA	Agricultural Projects' Management Agency
BSP	Business Service Provider
COGS	Cost of Goods Sold
COP	Chief of Party
COR	Contracting Officer's Representative
DCFTA	Deep and Comprehensive Free Trade Area
EMMP	Environmental Mitigation and Monitoring Plan
ERC	Environmental Review Checklist
EU	European Union
FSC	Farm Service Center
GAP	Good Agricultural Practices
GHGA	Georgia Hazelnut Growers Association
GOG	Government of Georgia
HACCP	Hazard Analysis & Critical Control Points
I/E	Individual Entrepreneur
ISO	International Organization for Standardization
ISP	Information Service Provider
LOP	Life of Project
M&E	Monitoring & Evaluation
MOA	Ministry of Agriculture
MOU	Memorandum of Understanding
MSC	Machinery Service Center
NFA	National Food Agency
PERSUAP	Pesticide Evaluation Report and Safer Use Action Plan
PHHP	Postharvest Handling and Processing
PMP	Performance Monitoring Plan
PP	Primary Production
Q1	Quarter One
Q2	Quarter Two
REAP	Restoring Efficiency to Agricultural Production
RFA	Request for Application
SME	Small and Medium Enterprises
STTA	Short Term Technical Assistance
TEC	Technical Evaluation Committee
TOC	Terms of Cooperation
USAID	United States Agency for International Development
USG	United States Government

Executive Summary

By the second quarter (Q2) of project year three (PY3), REAP largely completed its projected transition from grant making to technical assistance. This planned transition was laid out in detail in the PY3 Work Plan and was a major point of emphasis in the current quarter. As a result, the goals outlined in the PY3 Work Plan are already well advanced. REAP believes that the program direction emanating from two full years of operation, and now an additional quarter, remains clear, on track, and still appropriate. The smooth unfolding of REAP's program into PY3 as envisioned six months ago led to the emergence of new ideas for advancing the overall REAP agenda. Thus, new and innovative thinking increasingly influences REAP activities. It is worth noting that REAP has benefitted substantially from USAID's support of such innovation. While new approaches and experimentation become normal program functions, REAP remains mindful that they must contribute to the overall purpose of ensuring the success of REAP's 70 grantees through the life of the project (LOP) and beyond. Sustainable grantee success must remain the overarching goal of the project and it is essential that REAP maintain this focus as it increases in complexity and scope.

REAP demonstrated this commitment to grantee success through an innovative REAP Summit Meeting that brought together each of the 70 grantees to stimulate business-to-business interaction. Results seemed to exceed expectations in that significant interaction among grantees led to specific cooperative transactions, all aiming at improving enterprise performance and profits. A preliminary survey conducted immediately after the event indicates that ten grant enterprises have or are prepared to agree to cooperate in business activities. These could involve as many as 22 separate transactions. Given these early indicators of success, REAP will plan to host subsequent Summit Events as appropriate.

As REAP gains experience it also gains insights. For example, conventional wisdom in Georgia, suggests that the greatest problem within the national post-harvest handling network is lack of cold storage capacity. However, after a targeted STTA assignment to evaluate the cold storage capacity in Georgia, it was confirmed that the most pervasive problem is actually frequent and common misuse of existing capacity. Thus, REAP technical assistance is addressing real issues of proper management rather than the costlier option of simply increasing capacity. Though perhaps subtle in appearance, this distinction is very important in regard to addressing real and solvable problems and not expending time and energy pursuing solutions to misperceived problems requiring extensive and difficult to access financing.

An indication that REAP has come of age in terms of ability to influence activities within the agriculture sector is that there was increasing demand for REAP cooperation by outside entities. Formal Terms of Cooperation were requested by four organizations including National Food Agency, Agricultural University of Georgia, PUM Foundation of Netherlands and Nergeta Ltd., a private kiwi fruit producer REAP expects this trend to continue in the next quarter as collaboration with sector stakeholders expands.

Experience has dictated that in order to properly manage and direct the REAP field-oriented program extensive field presence is a necessity. The amount of needed field activity was perhaps initially underestimated. Meeting this need had become overly expensive but no less necessary. In

response REAP re-structured its travel procedures. It thereby cut the cost of travel by 33% while maintaining the same needed level of field presence.

REAP is pleased that its intern program has proven to be successful beyond initial expectations. Nevertheless it was startling that 511 applications were received from 12 universities in Georgia for entry into the next REAP intern class. This is not only an indication that the REAP formula for training young agriculture aspirants is effective, but also that reliable pathways for young people moving into agriculture professions are lacking. REAP will continue improving the quality of its intern program and will encourage other donors to address this educational need. REAP notes that to date 19 interns have gained permanent employment for which they credit their REAP program experience.

The Mariam Kutelia Research Grant, a new intern program component, was awarded for the first time during the quarter. The grant is funded directly by CNFA and invites competitive agriculture research proposals from incoming interns. One grant is awarded to the winning grant competitor in each intern group. This is unique within the donor community.

Activities during the current quarter have confirmed that the overarching program issues identified for continuing attention are appropriate. These issues were addressed in some form at the REAP Summit Meeting and will remain at the forefront of REAP activities through year five. Specifically these are access to finance; developing agronomist skills and broadening the agronomic technical base; introducing minimum and no tillage agriculture extensively; developing and establishing effective demonstration plots nationally; introducing logistics solutions to small-holder market development; and improving the capacity and management of cold storage facilities. REAP will attempt to make significant inroads in each of these critical areas, and, by so doing, can dramatically increase agriculture competitiveness and efficiency across Georgia.

The REAP, AgriGeorgia, Ferrero tripartite agreement was largely completed during the quarter. Selected agreement components that relate to the overall REAP agenda will be continued over the short term.

Three STTA initiatives begun during the reporting quarter address several of the overarching issues noted earlier. REAP anticipates that the reports emanating from these initiatives will offer effective solutions to problems of cold-storage capacity and management, marketing of small holder products, and identifying high-value niche products for export.

It became clear in the recent quarter that preferences have emerged within USAID concerning site visit destinations. Two REAP grant enterprises have drawn repeated attention by visiting USAID and USAID/Washington officials. The AgroKartli farm service center and the AromaProduct juice processing facility have become destinations requested by official visitors. This is due to their proximity, their progress, their important products, and the services they provide to smallholder farmers.

In preparation for the planned transition of the expatriate Chief of Party completing his assignment to be replaced by the current Georgian Deputy Chief of Party, REAP is restructuring its management profile. The logical changes called for will be completed well in advance of the actual

COP departure in the next quarter. REAP will continue at the same high level of performance following completion of this transition and under a modestly revised structure.

While REAP experience through ten quarters has been highly positive and significant accomplishments can be cited, some areas remain that need improvement or, at least, additional attention. The project will focus more on two important sub-sector areas that should be better addressed within the agriculture community in general as well as by REAP. These are advancing production problems through irrigation and developing a much wider range of qualified agronomists. REAP has addressed the latter problem and has begun appropriate initiatives, but more needs to be done and at a more rapid rate. The former problem of irrigation is a national concern that is recognized by REAP and its beneficiaries, but little substantive action yet has been taken. Part of addressing this issue is to determine how and to what extent irrigation fits into the already extensive REAP mandate. Fuller consideration of both these sub-sector issues will take place early in the following quarter.

Completion of the current quarter brings REAP to the half-way mark in its project life. The staff views program accomplishments at this stage with satisfaction and with some pride. At the same time it recognizes that there still is much to be done over the next ten quarters. The staff approaches the remainder of its tenure with great optimism and with confidence that at project completion REAP will have had a transformative impact on agriculture development in Georgia

Summary of Achievements

Component 1: SME Development	Component 2: Technical Assistance Program	Cross Cutting
• 34 grant projects are fully procured and 71.2% of grant portfolio disbursed. • REAP's grantees attend Fruit Logistica and one grantee finalizes $600,000 procurement order. • 711 new rural jobs created by REAP's grantees to date. • More than $27M in new gross sales by REAP's grantees to date. • More than 70,000 farmers trained in new agricultural practices.	• TOC for technical assistance between REAP and NFA signed • The Letter of Intent with the PUM Foundation of Netherlands signed for joint program of technical assistance signed • TOC with the Agricultural University of Georgia to implement training courses for agronomists signed • TOC with Nergeta to launch a joint kiwi support program signed • Three REAP supported companies obtained quality certifications.	• 14 APMA grantees trained in financial management topics • 65 GHGA farmers benefit input credit scheme developed by REAP • 70 women and young entrepreneurs attend regional meetings organized in five cities of West Georgia • 40 farmers attend trainings on new orchard set up practices organized within REAP/AgriGeorgia joint program

Operations Report

Operations, Facilities and Equipment:

REAP continues to maintain three offices located in Tbilisi, Kutaisi and Telavi. The Tbilisi office serves as the main project office, while the regional offices in Kutaisi and Telavi house regional coordinators and interns who are responsible for monitoring the progress of grantees and provision of support in all activities REAP is conducting in their designated regions.

Staffing:

Chief of Party Transition Plan

Early in Q3, REAP's expatriate COP will depart and contingent on USAID's approval, it is anticipated that the current DCOP will be promoted to the COP position. To support this transition, REAP will promote its current Field Program Officer to the key position of Program Director. Complementing the new COP, the Program Director position will replace the Deputy Chief of Party and will manage private sector partnerships, international sub-contractors, as well as serve as the liaison between REAP and the COR. The Program Director will support the COP in program implementation and will serve as acting COP in her absence. REAP's detailed transition plan will be submitted for COR concurrence and CO approval early in Q3.

Change in Non-Key Personnel Staff Responsibilities

To reflect the transition of REAP from grant making to technical assistance and grant monitoring, REAP has redrafted scopes of work for non-key personnel. An updated org chart will be submitted to REAP's COR for their concurrence after the transition of REAP's key personnel is approved.

Internship programIn Q2, REAP's 22 interns continued to work alongside their assigned technical specialists. In addition, REAP awarded the inaugural Mariam Kutelia Prize, a $1,000 research grant named for the former REAP intern who passed away during the Tbilisi flood in the spring of 2015. The winner of this prize will be conducting an extensive research project on ICT opportunities in agriculture.

Mariam Kutelia Award Winner

In March, REAP opened the call for applications for the next intern class. REAP received 511 applications from more than 10 universities. This large expression of interest from Georgian youth underlines the popularity of REAP's internship program and the need for meaningful opportunities for Georgia's university students and recent graduates.

Document and Deliverables Submission:

A summary of documents submitted to USAID in Q2 may be found in the table below:

Document	USAID Submission	Submission Date	USAID Approval
Project Reports and Manuals			
PY3 Q1 Report	Submitted	January 15, 2016	Approved
TOCs			
TOC with National Food Agency	Submitted	February 29, 2016	Approved
TOC with Nergeta	Submitted	January 29, 2016	Approved
TOC with Agrarian University	Submitted	March 2, 2016	Approved
TOC with Goodwill	Submitted	March 11, 2016	Approved
Technical Assistance Reports			
Implementation of Agriculture Lending Strategy by Bank Republic	Submitted	February 20, 2016	Approved
A Market Oriented Approach to Meeting Local Demand for Agricultural Products in Georgia	Submitted	March 31, 2016	Pending
Cold Storage Operations Assessment	Submitted	March 31, 2016	Pending

USAID FROM THE AMERICAN PEOPLE

REAP Restoring Efficiency to Agriculture Production

"CAMPA Provides Stability"

"We live in a very difficult region of country with a tough lifestyle where there are not many job opportunities. With this small income increase, we can change our children's future"

Lali Sujashvili, a mother of two who participated in CAMPA's pilot sea-buckthorn program.

Kazbegi - (Stepantsminda) is a small mountainous town located in the Mtskheta-Mtianeti Region of north-eastern Georgia. Located less than 20 KMs from the Russian border, the approximately 3,500 residents of Kazbegi face long and cold winters with minimal employment opportunities. Each year, the working population of Kazbegi dwindles as more young residents move to seek economic opportunities in larger towns of Mtskheta-Mtianeti or Tbilisi, reducing Kazbegi's already limited economy. Today, roughly 60% of Kazbegi's residents are females, many whom are self-employed or work for small seasonal businesses. With such limited opportunities for economic growth, the effect of any new economic activity resonates immediately throughout the community.

CAMPA, a Tbilisi based juice processing enterprise, recognized the potential of Kazbegi to serve as their center for developing a new line of juices made of wild mountainous fruits collected in this region.

With USAID's support, CAMPA provided training and established a mobile collection center in Kazbegi where CAMPA representatives worked with local residents to purchase wild sea-buckthorn and rosehip. This win-win relationship provided immediate economic returns for the local population while streamlining CAMPA's supply chain and lowering their operational costs.

For this first season, CAMPA procured 9 tons of sea-buckthorn and 32 tons of rosehip from more than 150 local farmers, providing more than $32,000 in additional income to residents of this vulnerable town. The procured raw material will be made into more than 16,000 litres of fresh juice and will be available for purchase in local stores beginning in April.

The economic benefits of this initiative are realized immediately by both CAMPA and the collectors. CAMPA obtains a rare forest product, while collectors receive capacity building training and needed income.

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Component 1: SME Development in the Agriculture Sector

With REAP's $6M grant fund fully committed, REAP's Q2 activities focused on grantee monitoring and procurement. To date, almost all of REAP's grantees have completed the agreed upon construction milestones and REAP has completed procurement for 34 grantees; 21 others are in a stage of implementation (the list of REAP grantees provided in the Annex A). The accelerated progress of REAP's grant program will enable the majority of its grantees to be operational for the remaining 2.5 years of REAP, amplifying impact, increasing availability of technical assistance and improving sustainability. A map of REAP's grant projects can be found in Annex B.

Grant Cost-Share and Procurement

As of the end of PY3 Q2, REAP's grantees spent more than $13M in cost share, 77% of their commitment, and REAP has procured more than $4.27M, or 71%, of its total grant fund. 34 grantees are fully procured, partial procurements underway for 21 grantees. By the end of the Y3, all 15 remaining grantees will be in a process of procurement.

Below is a table that illustrates cost-share and grant funds disbursed by priority direction.

	FSC/MSC	PHHP	PP	ISP	Total
Cost Share Committed	$8,806,602	$8,209,549	$159,350	$151,585	**$17,327,086**
Cost Share Spent	$8,326,095	$4,900,084	$99,044	$63,402	**$13,388,625**
Grant Funds Committed	$3,246,380	$2,634,325	$55,050	$64,245	**$6,000,000**
Grant Funds Disbursed	$2,221,416	$1,948,769	$39,889	$64,180	**$4,274,254**

Grant Monitoring

In order to effectively manage the implementation process, each grant project is assigned an activity manager who, in coordination with field coordinators based in Tbilisi, Telavi, Guria, and Kutaisi, is responsible for overseeing the implementation of the grant project. Through PY3 Q2, REAP's active grantees have created more than 700 new rural jobs, generated $27M in new sales and provided more than $4M new cash markets to smallholders. These numbers will continue to grow as more of REAP's grantees become fully operational. Below are some highlights from grantees activities in Q2.

IE Mgeladze's Greenhouse in Guria

I/E Valerian Mgeladze

I/E Valerian Mgeladze, officially registered in 2008, has been engaged in agricultural production for more than 3 decades with its primary activities in perennial/annual grain crop development and production of vegetables, including cucumber, tomato, cabbages, eggplant, pepper, bell pepper, herbs, salad greens, and vegetable seedlings. Within REAP, I/E Valerian Mgeladze has expanded

and improved their current business activities and increased the quality of their vegetable production through the incorporation of modern techniques in the management of its seedlings. Recently, REAP supported Valerian Mgeladze to attend MASHAV trainings in Isarel on modern technologies in vegetable growing. As a result of REAP's assistance, Mr. Mgeladze was able to participate in the newly launched "Produce in Georgia" program implemented by the Ministry of Economy and Sustainable Development. Within this program, Mr. Mgeladze is expanding his nursery established with REAP's support. To date, the grantee has provided more than 25,000 GEL in high quality seedlings to local farmers.

Agroservice Ltd.

Agroservice Ltd. is a successful provider of agricultural inputs and mechanization services in Kakheti Region. With REAP's support, Agroservice established a new full-fledged farm and machinery service center, comprising of a training room and administrative unit. This new FSC/MSC provides improved input supplies and mechanization, as well as, financial services, real-time disease control system and on-site consultations to more than 6,000 local farmers. Revenues from gross sales are around $1.6M and to date the company has created 11 new permanent positions, including 5 jobs for women.

I/E Tsisia DIgmelashvili

With REAP's assistance, the company established a new modern FSC including a conference hall where practical trainings are held regularly on effective usage of inputs. The center is already providing a reliable input supply along with on-site consultation and machinery services to around 500 local farmers and entrepreneurs. To date, total revenues of the company have reached $280K and the enterprise has 7 new jobs, including 4 permanent positions for women. Within the project, the company is planning to arrange a demonstration plot of 3 ha to organize trainings for grain, grape and other vegetable growers.

REAP Grantee Participation in Fruit Logistica

REAP Grantee Mamuka Tsikoridze at Fruit Logistica 2016

To expose REAP's grantees to international marketing and quality standards and new technologies in fresh fruit and vegetable processing, REAP organized a trip for 13 grantees to attend the annual Fruit Logistica trade show in Berlin, Germany. With more than 2,700 exhibitors and 65,000 visitors, Fruit Logistica is one of the world's leading international trade fairs for fresh fruit and vegetables. Representatives from FSCs and processing enterprises met with international exhibitors showcasing the latest technologies in packaging, grading, sorting, processing and cold storage equipment and with retailers representing international producers of small, medium and large companies. In addition, REAP grantees met with Germany's Importers Association and toured a local wholesale market in Berlin to further develop potential trade linkages and understand requirements for entering the market. During Fruit Logistica, REAP grantee, Gemuani, met with and finalized a procurement order from Italian supplier Pigo worth $600,000 that will contribute to the further development of their business.

REAP Summit

In March, REAP organized a one and half day summit to bring together all 70 of REAP's grantees to facilitate linkages between them and to find solutions for common problems plaguing Georgia's agriculture sector.

To facilitate discussion, REAP's grantees were separated by priority direction (FSCs/ISP and PHHPs/PP) and specific agendas were prepared for each group. Below please find information on the topics covered during REAP's summit.

Group Sessions at REAP Summit

REAP Summit Topics	
Farm Service Centers	Postharvest Handling Enterprises, Primary Producers
Modern Demonstration Plots	Establishing consolidation centers
Benefits of and methods for introducing minimum tillage	Postharvest handling and cold storage operations
Maintenance of agriculture machinery	Creating grantee linkages
Input credit schemes for smallholder farmers	Accessing new financing for equipment upgrades
Introduction of financial management software	TA needs for enterprises

Based on grantee interactions during and on cooperative activities following the Summit, the event was judged to be highly effective. It succeeded in the primary goal of encouraging practical and substantive cooperation among grantee enterprises. According to meeting evaluation responses, a universal conclusion emerged that such coordination and business to business (b2b) meetings should take place regularly, at least on a regional basis.

USAID FROM THE AMERICAN PEOPLE

REAP Restoring Efficiency to Agriculture Production

"AgroKartli enables us to implement modern farming practices"

"The success of AgroKartli is based on the trust that it has achieved with its clients. For years we have received high quality products and services from AgroKartli. AgroKartli was and still is the company supporting us to recover and produce high quality agricultural products"

Mikheil Edilashvili – Local Farmer and Client of AgroKartli

In Middle Kartli where the Liakhvi River flows into the Mtkvari, the industrial town of Gori is nestled against picturesque hills. With a population of more than 60,000, Gori serves as the administrative and cultural center of Shida Kartli, one of the most important agricultural regions in Georgia. In 2008, during the conflict with Russia, Gori was attacked by the Russian Air Force which significantly damaged city infrastructure and surrounding agricultural land.

After the conflict, a Georgian entrepreneur, Goga Simonishvili, assisted farmers throughout Shida Kartli to re-establish their livelihoods by supplying much needed agricultural inputs, veterinary drugs, and machinery services. Since that time, Mr. Simonishvili has grown his business from a small wholesale input supply shop that once supplied several thousand farmers to one of the largest farm and machinery service centers in the entire region.

"It was the most difficult period of my life. People living in my region lost faith in recovery. USAID's support in 2008 was vital for us to survive"- stated Goga Simonishvili, owner of AgroKartli Ltd.

With USAID/REAP support, AgroKartli upgraded its facilities, allowing it to increase the range of products it offers to smallholders throughout the region. AgroKartli now offers input supply as well as modern agricultural machinery, veterinary services, financial services for smallholders, and real-time disease control updates provided through SMS services. In addition, AgroKartli provides onsite consultations and manages a modern training room where smallholders receive training on best agricultural practices. As of today, the expanded AgroKartli has generated more than $3M in new sales and provided improved mechanization and input services to more than 6,800 new farmers.

"AgroKartli makes high quality inputs and modern technologies affordable and provides us access to agronomist services and disease control systems. All of this enables us to implement modern farming practices"

Shalva Kechkhuashvili – Apple Farmer from Gori

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Component 2: Technical Assistance Program

REAPs technical assistance component provides individual consultancies and group trainings to agricultural enterprises and commercial farmers to support the sustainability of increased investment in agribusiness and to improve on-farm production and quality. Throughout Q2, REAP continued to provide individual consultancies and group trainings to grantees and non-grantee enterprises across a variety of technical areas including: packaging and labeling, food safety and quality management, Global GAP, SME management and best agricultural practices. In addition, REAP launched cooperative technical assistance programs with the MOA (please see section on Cooperation with Government of Georgia for more details). To date, REAP has business development and technical assistance to more than 350 Georgian MSMEs.

Individual Consultancies

Marketing

In Q2, REAP continued to provide individual marketing TA to REAP grantees to increase their brand awareness and to promote their products and services on the market. REAP is currently engaged in three distinct marketing activities:

Corporate Brochures

REAP is currently assisting eight grantees to develop professional business brochures in Georgian and English languages that can be utilized by these enterprises when meeting potential buyers or attending exhibitions. The companies currently receiving this assistance include: Farkoni, AgroExport, AgroInvestService, Anaseuli Tea Factory, Campa, Georgian Fruit Company Ltd., Santa and Dr. George Laboratory. REAP anticipates these brochures being completed during Q3.

Development of Websites for FSCs/MSCs

REAP is piloting the development of functional and user-friendly webpages for 11 operational FSC/MSC grantees in Kakheti, Racha, Samegrelo and Imereti regions. The webpages will assist the FSCs/MSCs to promote their products and services to more smallholders, will contain pertinent information on crops and a schedule of upcoming trainings. Once the webpages are operational, REAP will provide practical training to the FSCs/MSCs to efficiently manage and update.

Brand Identity

Building on REAP's successful experience developing new packaging and labeling for grantees such as Herbia and Farkoni, REAP is providing a brand identity consultancy to grantee Elenikstra to develop a new brand identity include logo and packaging for their dried fruits. The company sells their products under the brand name Kareli Fruits and Georgian consumers will be able to see their new packaging during this upcoming season.

Food Safety and Quality Standards

With the signing of the Deep and Comprehensive Free Trade Area (DCFTA) agreement and the market demanding higher food safety standards, REAP continues to work with grantee and non-grantee enterprises to assist them to obtain internationally recognized food safety certificates and to improve their quality management practices. In addition, REAP began implementing food safety and quality standard programs with two agencies of the Ministry of Agriculture, Agriculture Projects' Management Agency (APMA) and the National Food Agency (NFA) to provide individual consultancies and group training to processing enterprises and slaughterhouses in food safety.

Principles of HACCP for Processing Grantees

With the DCFTA effective as of September 2014 and the ongoing approximation of Georgian legislation to EU standards, Georgian processing companies are obligated to adhere to globally recognized food safety standards and to introduce HACCP principles by the end of 2016. To assist REAP's grantees conform to Georgian legislation and improve their food safety operations, REAP finalized customized food safety consultancies to 11 grantees engaged in processing operations from REAP's 005A and 005B rounds and to one firm supported by USAID's Broadening Horizons: Improved Choices for the Professional and Economic Development of Woman and Girls Program. These consultancies evaluated the companies' compliance with general hygiene and sanitary rules set by Georgian legislation and provided a gap analysis against HACCP requirements, food safety trainings and improvement recommendations for compliance. These consultancies will help the processors identify and address non-compliances in a timely manner, enabling them to adhere to international standards and apply for certification to take advantage of new opportunities presented by the DCFTA.

Individual Food Safety Certifications

In Q2, REAP's technical assistance consultancies in food safety and quality standards resulted in the certification of three enterprises from international auditing companies:

- REAP grantee Farkoni Ltd., collector and processor of wild fruits and berries certified for ISO 2200 by Lloyd's Register LRQA.
- REAP grantee Gemuani Ltd., operator of fresh fruits and kiwi orchards, certified for Global GAP by TUV Hellas.
- Non-grantee Westnut Lt., a fully equipped hazelnut processing facility certified for ISO 22000 by Bureau Veritas.

With certified food safety management systems, the firms meet international requirements for export and will be able to expand their presence on the domestic and in new export markets.

To date, REAP has completed four food safety and quality standards certification. These consultancies are led by REAP's local consulting partners and financed on a 50/50 cost-share basis with the beneficiary firms. An additional 14 certifications are currently underway or in the pipeline, including those sourced from cooperation with GOG partners APMA and NFA.

	Beneficiary Name	Type	Product(s)	Standard Type	Status
1	Santa Ltd	Grantee	Cheese	HACCP	Ongoing
2	Pirosmani Ltd	Non-grantee	Diary	Bio certification - Green standard	Ongoing
3	Georgian Lemonade Ltd	Non-grantee	Lemonade and juices	ISO 22000	Ongoing
4	Nergeta Ltd	Non-grantee	Kiwi	IFS	Ongoing
5	Geo demo Ltd	Non-grantee/APMA	Hazelnuts	ISO 22000	In negotiation
6	NutInvest Ltd	Non-grantee/APMA	Hazelnuts	ISO 22000	In negotiation
7	GN Company Ltd	Non-grantee/APMA	Hazelnuts	ISO 22000	In negotiation
8	KTW-Agro-Keda Ltd	Non-grantee/APMA	Fruit processing	ISO 22000	In negotiation
9	KTM-Agro-Chokhatauri Ltd	Non-grantee/APMA	Fruit processing	ISO 22000	In negotiation
10	Vita Products Ltd	Non-grantee/APMA	Cheese production	ISO 22000	In negotiation
11	Unifish GE Ltd	Non-grantee	Fish	ISO 22000	In negotiation
12	Georgian Herbs Cooperative	Non-grantee	Herbs	Global GAP	In negotiation
13	Geofish Ltd	Non-grantee	Fish	ISO 22000	In negotiation
14	AER Company Ltd	Non-grantee	Hazelnuts	FSSC 22000	In negotiation

Group Trainings

Export Promotion

In Q2, REAP formalized a partnership with the Enterprise Agency under the Ministry of Economic and Sustainable Development to include REAP's grantees in a one-month export promotion training course initiated by the Agency. REAP grantees Herbia, Farkoni and Laboratory Doctor George will participate in the Certified Export Manager (CEM) course that will train participants with practical knowledge and skills needed to successfully export. Under REAP's partnership with the Ministry, 70% of the course fee is covered by the Enterprise Agency.

SME Management

To improve the management capacity and capabilities of grant recipients that are start-ups or in the early stages of their development, REAP organized a three-day SME training course. Attended by 20 companies, including representatives of REAP's supported Gender Platform, this training covered topics such as agribusiness management, product quality and safety management, marketing strategies, Georgian SME legislation and financial management.

Mechanization Trainings for FSCs/MSCs

In February, REAP's mechanization expert completed an assessment of training needs among grantee FSCs/MSCs. Based on the findings of the assessment, individual trainings and coaching was delivered to seven FSCs/MSCs to increase their knowledge of mechanization technologies, provide maintenance oversight and instruction. REAP will continue these trainings to all grantee FSCs/MSCs and will conduct machinery monitoring visits two per year to continue to build capacity and ensure proper machinery maintenance.

Famer Field Days

In Q2, REAP's local Demonstration Plot Consultant and technical assistance team began preparations for farmer field days which will begin in April and last through September. Visits were made to demonstration plots in Samegrelo, Guria and Racha-Lechkumi regions to monitor

progress and to update REAP's field day calendar so that field days will fully capture new agriculture technologies and varieties that are being demonstrated on the sites of REAP supported enterprises throughout Georgia. In addition, REAP worked closely with the Embassy of Israel's Mashav program to identify two agriculture experts who will travel to Georgia in April to provide customized, crop-specific consultancies to REAP's FSCs/MSCs and primary producers. As part of the consultants' visit, farmer field days will be organized on REAP's demonstration plots to transfer knowledge and skills to a broader community of smallholder farmers. A tentative calendar of upcoming field days for Q3 is provided in the table below:

	April	May	June
I/E Zurab Tetvadze	Dry bean and soy bean production with Mini-Till and strawberry production with plastic much and drip irrigation in Dedoplistkaro		
Land preparation and seeding	**15 April - FD in Dedeplistkaro (seeding of beans and soya with minimum tillage technology) Mashav Expert**		
Harvesting			**Haricot Bean**
Luk-Agro LTD	Maize production in Tsnori with Mini-Till and hose reel irrigation		
Land preparation and seeding	**12 April - FD in Tsnori (seeding of maize with minimum tillage technology) Mashav Expert**		
Agro Kartli LTD	Maize production with mini-till and vegetable production with plastic mulch and drip irrigation in Gori		
Land preparation and seeding	**FD in Kareli (seeding of maize with minimum tillage technology)**		
Fertilization and pest control			**Maize**
Gvaza LTD	Dry bean and soy bean production in Senaki		
Land preparation and seeding	**April (date TBD) - FD in Zugdidi (seeding of dry bean with minimum tillage technology)**		
"Mindia 2011" Ltd	Strawberry production on mulch and drip irrigation		
Irrigation and plastic mulch		**FD in Kvareli (demonstration of irrigation system and mulching for strawberry production)**	
Irrigation, Fertilization and pest control		**FD in Bolnisi (demonstration of pest management for potato production)**	

International Consultants

During Q2, REAP conducted three assessments to benefit grantees' operations, analyze import substitution opportunities and evaluate niche products for export. Led by international consultants, these assessments will serve to guide future technical assistance activities and benefit the donor community.

Domestic Market Assessment

The rural population of Georgia who is involved in the agriculture sector suffers from the high imports of fresh fruits and vegetables, as an agricultural trade deficit represents missed opportunities for higher employment and income generation and economic multiplier effects in Georgian rural areas. The REAP can play a positive role in addressing this problem while utilizing a market-oriented approach to stimulating and upgrading domestic supply to meet the needs of buyers of food products. In late Q1 the REAP engaged an international consultant coupled with the local one to conduct the domestic market assessment to identify crops/products with the high potential to decrease the trade deficit and to propose a plan of actions that can be implemented within the lifetime of the REAP project. The consulting team based on special criteria scored supply and demand side of 23 products in order to identify 10 agricultural products for which there is strong demand in the local market, and for which Georgian agribusiness also have best ability to produce the products locally. With the combination of qualitative and quantities analysis the list of products has been developed and the plan of actions was proposed to REAP. The consultant's report is submitted to USAID for their review and recommendations.

Niche Market Analysis

Georgia with its diversity of climatic zones and soil types produces and has the potential to produce a wide variety of different crops that those can have a high potential for the export or domestic markets. In Q2, REAP engaged a team of international consultants to assist the project analyze high value and niche products that are produced by grantees and non-grantees and to develop a marketing strategy for these sub-sectors. The preliminary field work has been completed and the report will be finalized in Q3. Once the report is completed, it will be shared with USAID for their review and recommendations.

Collaboration with Donors/Projects

APMA Technical Assistance Program

To effectively coordinate and leverage financial and technical resources, REAP and APMA entered into a joint program of technical assistance that will be in effect until July 1, 2018. Under the terms of cooperation, REAP and APMA will jointly provide group trainings and individual consultancies to APMA's grant beneficiaries. Initially focusing on food safety and DCFTA, group trainings will be provided free of charge to APMA's grantees, while individual consultancies will be cost-shared 50% by REAP, 30% by APMA and 20% by the grantee. Descriptions of cooperative activities between REAP and APMA may be found below.

Financial Management Training

To equip agribusinesses with improved financial management skills, REAP and APMA collaborated to host a two-day training course for 14 APMA beneficiaries. Topics covered in this two training course included: management accounting, structuring and analysis of financial statements, time value of money, and structuring and budgeting equity.

ISO 22000 Certifications

During Q2, REAP and APMA initiated a joint program to assist APMA beneficiary processors to become ISO 22000 certified on a cost-share basis. Within the framework of this program, REAP conducted initial site visits and solicited request for proposals to provide ISO 22000 consultancies to three hazelnut processors in Samegrelo and two fruit processors in Adjara and Guria. Together,

these companies provide a sustainable source of income to more than 1,200 smallholders who supply fresh fruits and hazelnuts to the processors. The consultancies for these five enterprises will begin in early Q3.

NFA

During Q2, REAP and LEPL National Food Agency (NFA) signed a Terms of Cooperation (TOC) to launch a cooperative program of technical assistance that will benefit Georgia's slaughterhouses and improve their food safety standards. Under the TOC, REAP and the NFA will combine their efforts to provide consultancies and group trainings in food safety and quality management that will strengthen local slaughterhouses capacity, improve their performance, increase food safety for Georgian consumers and bring them in compliance with international standards. In early Q3, REAP and the NFA will begin a program of five awareness trainings in HACCP principles and food safety to 90 slaughterhouses.

PUM

During Q2, REAP and the PUM Foundation of Netherlands signed a Letter of Intent (LOI) to engage in a cooperative technical assistance program. The program will leverage PUM's technical expertise and experience supporting the development of small and medium-sized enterprises in 70 countries to provide free of charge tailored, hands-on consultations in modern agricultural technologies to REAP's grantees. In reviewing REAP's portfolio, REAP and PUM agreed to initially work with Eleniksta, Zoreti, Santa, Zena and MTP. REAP and PUM are finalizing the necessary paperwork to initiate these TA projects and expects them to be fully underway during Q3.

USAID/SEAS

During Q2, REAP and USAID's Strengthening Extension and Advisory Services (SEAS) designed a technical assistance program to provide awareness training to more than 150 MOA extension agents in DCFTA and food safety. Together, REAP and SEAS will deliver 7 trainings in the regions to improve the knowledge and awareness of extension officers in good agriculture practices and chapters of the DCFTA relevant to primary production. With this knowledge, the extension agents will able to better inform their clients and support them in implementing DCFTA requirements.

Cooperative Program with Nergeta

In order to support kiwi production in Georgia, REAP and Nergeta, a leading kiwi producer, collector and exporter signed a TOC to launch a joint technical assistance program to increase the productivity and incomes of Georgian kiwi farmers. The program will leverage Nergeta's technical expertise to host farmer trainings and will establish a nursery that will provide low cost plant material to Georgian farmers. In addition, REAP and Nergeta will work together to upgrade their pack house to improve the postharvest capabilities of the firm. Consultancies and farmers training will begin in earnest in Q3.

Terms of Cooperation with Agrarian University

During Q2, REAP and the Agrarian University signed a TOC to formalize the internship program between REAP and the university and to launch the design and delivery of training courses for REAP supported agribusinesses. Under the TOC, REAP and the Agrarian University will work together to provide practical training and on the job experience for young promising students while continuing to build the capacity of Georgian professionals.

Collaboration with AgriGeorgia/GHGA

New Orchard Demonstration Plot

Under the framework of the tripartite agreement between REAP, AgriGeorgia and GHGA, a 0.7ha demonstration plot was planted by GHGA member farmers and was utilized for theoretical and practical trainings. Led by AgriGeorgia's trained agronomists, more than 40 local farmers participated in the field day where they received theoretical and practical training on establishing a new orchard. In total more than 400 new hazelnut varieties were planted.

Input Credit

Access to affordable credit is a constant challenge for smallholder hazelnut farmers. With the fertilization period beginning in late February, most smallholder farmers must weigh the financial cost of borrowing money at expensive market rates or not applying appropriate fertilizer and thus lowering their yields. To support GHGA member farmers, REAP worked with the association, input suppliers and financial institutions to negotiate the financing and purchase of fertilizer directly from a wholesaler at a reduced interest rate. Under this scheme, farmers would receive a six months grace period on principal and interest and due to the discounted wholesale price, farmers total cost including interest was less than the retail price for the fertilizer. In total, more than 27,000 GEL was financed through this program, assisting 65 GHGA farmers to buy more than 17 MT of fertilizer.

Cross Cutting Activities

Monitoring and Evaluation

During Q2, REAP's M&E Manager continued to track the performance of REAP's grant portfolio and conducted 40 site visits to collect monitoring and evaluation forms and to conduct grantee surveys.

While REAP's PMP indicators are reported on an annual basis, REAP's M&E team collects performance monitoring and evaluation data quarterly to maintain data quality and to update REAP's management on the program's process. In Q2, REAP collected data from 42 operational grantees. Below, please find key performance indicators for these businesses.

	Indicator	Actual to date	Updated LOP Targets	Progress Against Updated LOP target	Progress Against Contractual Obligations
Contractual Indicators	Number of jobs created with USG assistance	711	800	89%	95%
	Number of distinct clients purchased products or services from USG assisted SMEs	73,842	156,185	47%	55%
	Gross incremental sales by USG assisted SMEs (all type)	$27,900,954	$ 60,900,000	46%	70%
	Number of farmers supplying primary agricultural products	2,823	2,500	113%	113%
	Value of primary agricultural products supplied by farmers	$4,052,833	$ 12,400,000	33%	41%
	Value of new private sector investment in the agriculture sector	$13,405,801	$16,500,000	81%	96%
	Number of individuals who have received short-term agricultural training	78,753	164,505	48%	53%
Other Key Indicators	Value of additional financing obtained by the private sector	$13,807,024	$7,500,000	197%	n/a
	Number of hectares under improved technologies or management practices as a result of USG/REAP assistance (Ha)	370,150	240,000	154%	n/a
	Number of MSMEs receiving business development services from USG assisted sources	364	220	165%	n/a

REAP is pleased to report that the program has achieved more than 50% of its contractual indicators for six of seven contractual indicators and has exceeded or will exceed in the next quarter three contractual indicators. The only indicators where REAP has performed less than 50% is the value of primary agricultural products supplied by farmers. This indicator is driven by the agriculture season and with the majority of crops being harvested in the fall, this number will rise in upcoming quarters. It should be noted, that these results are achieved with only 42 grantees reporting. As more grantees come online in future quarters, REAP's development impact will continue to grow.

CBA

REAP continues to monitor and collect data from enterprises involved in the cost benefit analysis (CBA). REAP's CBA consists of two distinct analyzes, an economic CBA and financial CBA. The economic CBA is utilized to analyze social benefit of an intervention while the financial CBA provides insights on financial performance ratios. In Q2, REAP's international CBA consultant conducted a one week assignment in Georgia to update REAP's CBA methodology and analyze data collected to date. The most recent CBA results and consultant report may be found in Annex D.

Gender and Youth

Mainstreaming gender perspectives throughout REAP's activities continued through the following activities.

Regional Meetings

Under the framework of REAP's Strategic Platform, REAP's Gender Team facilitated five regional and informational meetings held in Imereti, Adjara, Guria, Samegrelo and Tbilisi. The meetings presented information on REAP's forthcoming gender- and youth-related activities for PY3 to women and young agricultural entrepreneurs. REAP mobilized non-member women and young agricultural entrepreneurs through cooperation with the Ministry of Agriculture, regional USAID/Centers for Civic Engagement and regional representatives of ENPARD. In total, 70 women and young agricultural entrepreneurs attended REAP's regional meetings.

Gender Platform Regional Meetings

Informational Services

REAP's Gender Team continued to provide access to information services to women agricultural entrepreneurs through various channels including Facebook, mailing lists, phone calls and SMS. REAP also cooperated with USAID's new YES Georgia program and assisted them to disseminate information on their Young Entrepreneurs' School to REAP's grantees and members of REAP's gender platform.

Berry and Fruit Training Event

In cooperation with USAID's Farmer to Farmer (F2F) Program, REAP organized a two day event in Kakheti where 43 attendees, including 24 women, received theoretical and practical training from a local horticulture expert and an American volunteer in blackberry, raspberry and strawberry production. Hosted by two REAP grantees, Cooperative Gile and AgroVita, the training included a visit to Gile's orchard and onsite consultations by the local and American expert.

Berry Training in Kakheti

MASHAV

In Q2, REAP continued to benefit from the continuing education program provided by the MASHAV program. Maia Makava, owner of REAP grantee AgroSakhli, spent three weeks in Israel learning about and receiving training in modern agricultural extension methods and tools. Operating a FSC in Samegrelo, Maia Makava will utilize this training to upgrade the extension services being offered by her enterprise. Training costs for this program are funded through the Embassy of Israel.

Environmental Management and Monitoring

During Q2, REAP's Environmental Management and Monitoring focused on monitoring the activities of REAP's grantees with respect to their Environmental Monitoring and Mitigation Plans (EMMPs). REAP's Environmental Specialist conducted 27 monitoring visits and designed environmental site memos, provided recommendations and comments to the grantees. A list of the environmental monitoring visits by region may be found below.

REAP PY3 Q2 Environmental Management and Monitoring Site Visits	
Kakheti Region Sagarejo, Gurjaani, Signagi, Dedoplistkaro, Lagodekhi, Kvareli, Akmeta Districts	Tsisia Digmelashvili, Zurab Tetvadze, LukAgro, Lagodekhi, Ambrosi Macharashvili, Agrotrading, Alexi Tediashvili, Mindia 2011 , David Omanashvili, Marina Akolashvili, Agrovita, GILE cooperative,
Kvemo Kartli Region Gardabani, Bolnisi	Zena Ltd, Deve+
Imereti Kutaisi, Tskaltubo, Sachkere	Geguti 2005, Alva Ltd, Herbia, Mamuka Tsikoridze, Gurmani Ltd
Guria Ozurgeti, Natanebi	Agropharm+, Guria Farmer House, Zaza Mameshvili, Ia Urushadze
Ajara Kobuleti, Batumi	Agroexport, AgroInvestService
Samegrelo Zemo Svanetli Senaki, Zugdidi	Gvaza Ltd, Gejeti 2010, Cooperative Tkaia

Program Outreach and Communications:

USAID/REAP Video Production

REAP's Communication and Outreach Specialist continues to work with two video production companies to document project activities. The video production companies are capturing the progress of grantees from initial construction through project openings. These videos will be produced in English with Georgian subtitles and will be utilized to share REAP's story and promote USAID's work in Georgia. Below is a list of representative companies being filmed to tell the REAP story.

Processing Enterprises	Women Owned Enterprises	FSC/MSC	Cold Storage Facilities
AgroPharm Plus, LTD	Santa, LTD	AgroKartli, LTD	GFC, LTD
AgroExport, LTD	IE Marina Akolashvili	IE Omanashvili	GFC, Cooperative
AgroInvest Service, LTD	Gile, LTD	AgroService, LTD	Eleniksta, LTD
GeoFlower, LTD	Laboratory Dr. Georgia, LTD	RAS, LTD	Iveria, LTD
Herbia, LTD	IE Ia Urushadze		
AromaProduct, LTD	Zoreti, LTD		
	AgroSakhli, LTD		

Outreach Events

US Ambassador, Mission Director and US Senate Foreign Relations Committee Members Visit AgroKartli

During Q2, REAP's grantee AgroKartli hosted two events with the new US Ambassador, Ian Kelly and USAID Mission Director, Douglas Ball, and two staff members from the US Senate Foreign Relations Committee, John Rader and Ben Purser. The distinguished guests received a tour of the facility from AgroKartli's owner and had an opportunity to hear from local farmers how AgroKartli's FSC is contributing to the agriculture development of the villages surrounding Gori. Located less than 20 KM from the Administrative Boundary Line (ABL) with South Ossetia, AgroKartli provides high quality inputs and technical trainings to vulnerable farmers affected by international geopolitics.

US Ambassador and MD attending farmers training in AgroKartli

QSI students visiting Campa

QSI Students Tour CAMPA Facility

In February, sixth grade students from the QSI International School of Tbilisi visited REAP's grantee CAMPA. Students received a guided tour by CAMPA's owner and founder, David Buadze, who provided information on juice production and entrepreneurship, and enjoyed a tasting station featuring a selection of CAMPA's juices.

REAP Grantees and Supported Enterprises in the News

Several grantee and non-grantee supported enterprises were featured by a number of TV broadcasters and the press:

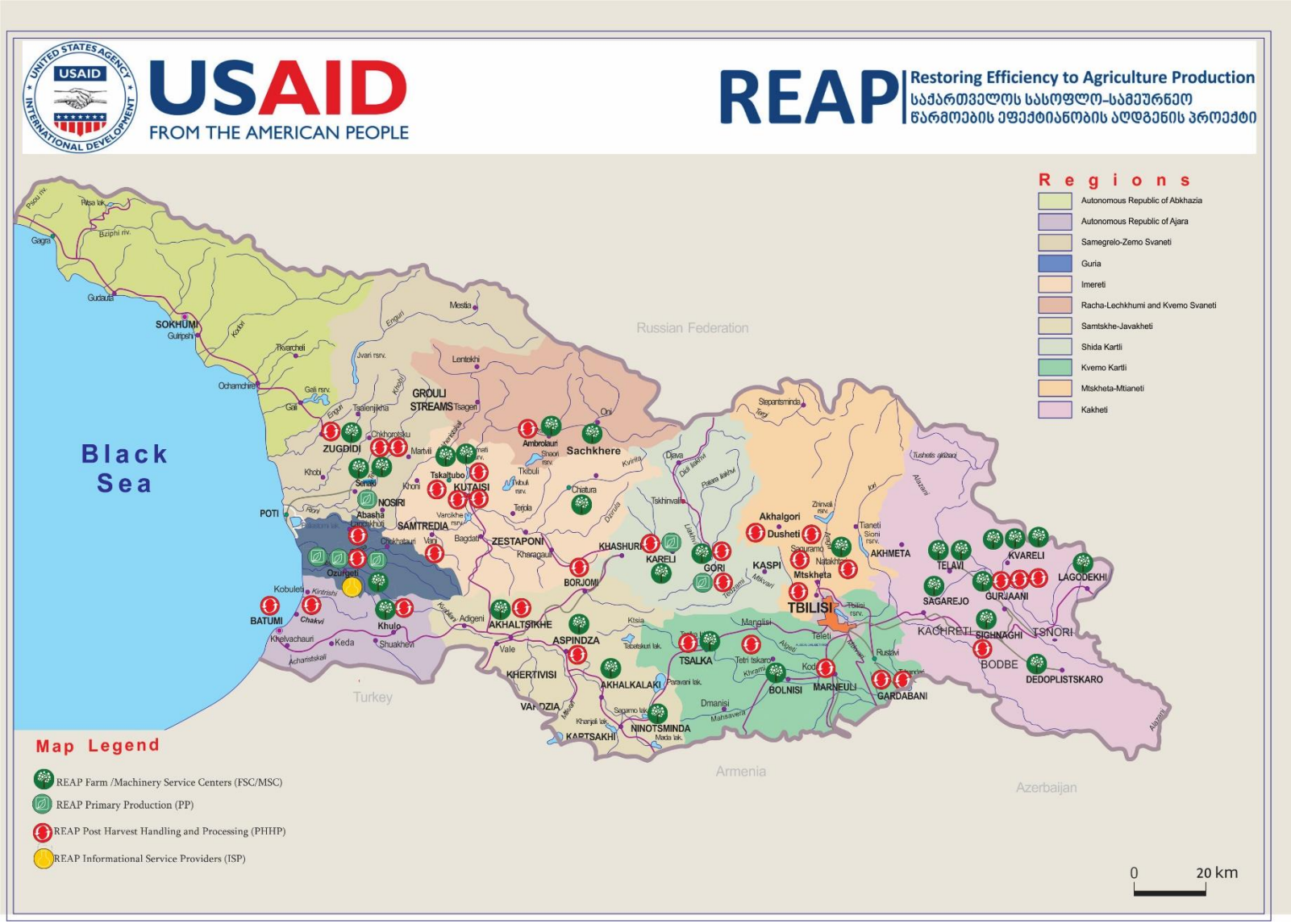
- Nona Tordia, Owner of Gemuani, Grantee: http://1tv.ge/ge/videos/view/160203.html, http://www.bpn.ge/persona/21541-filologi-qalis-kivis-plantaciebi.html, http://cbw.ge/business/the-first-plant-of-innovative-drying-technology-to-build-in-samegrelo/
- Coverage of REAP's Training event on Berries: Gurjaani TV (https://www.youtube.com/watch?v=k2cvcn1YbMw –
- Grantee Gile: http://www.georgianjournal.ge/business/32282-european-market-needs-indefinite-amount-of-georgian-blackberries.html)

- Non-grantee Chirifuit: Business Contact http://businesscontact.ge/ka/article/quotchirifrutiquot-tutis-chiris-warmoebas-gegmavs/2212)
- Non-Grantee Keskia and Kodu: https://www.youtube.com/watch?v=G2C87J2CJjEhttps://www.facebook.com/2030official/videos/772512789552207/)
- Maia Mikava, Owner of AgroSakhli, Grantee: http://www.myvideo.ge/?act=dvr&chan=gpb2hq&seekTime=27-03-2016+12%3A46)

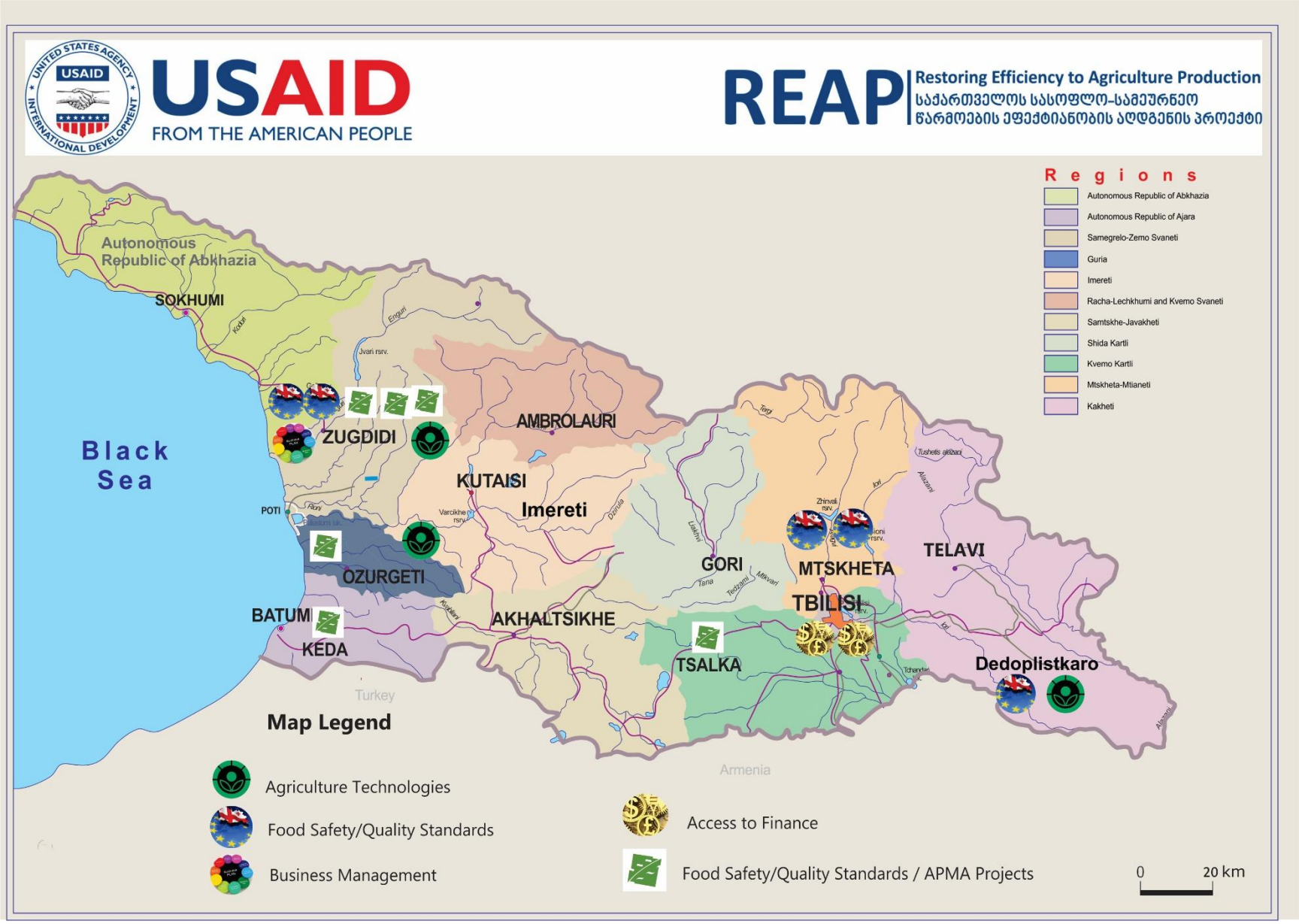
Key Constraints:

No major programmatic or operational constraints were observed this quarter.

Annex B: REAP Projects Map



Annex C: Map of REAP Non-Grantees



Annex D: ASSESSMENT OF THE DATA COLLECTION FOR COST BENEFIT ANALYSIS (CBA) IN REAP

By Joseph Tham

Introduction

At the end of the REAP project in 2018, full CBA analyses will be conducted for 25 projects. For the year 3, by the end of March, CBA analyses including the actual data are conducted for first 6 projects, the CBA of which has been conducted in 2014 and the first year actual data are available.

This report aims to examine the following key issues related to the CBA analysis:

I. Assess the quality of data that has been collected by the M & E (Monitoring & Evaluation) team.
II. Provide guidance on aggregating and analyzing the CBA data to provide an assessment of the impacts of REAP's portfolio.
III. Provide suggestions on integrating CBA information into the Performance Monitoring Plan (PMP) to streamline the utilization of CBA to improve the performance of grant projects.
IV. Analyze and assess the methodology for attributing the impact of non-grantee technical assistance.
V. Provide recommendations and next steps for the CBA data collection and analysis.

Availability of new data

REAP collected the **actual** financial information from its 6 grant projects (list of these grantees is provided below in the table) for the first financial year (2015) on the following items:

- Total annual revenue
- Accounts receivable
- COGS
- Annual labor costs
- General administrative costs
- Sales and marketing costs
- Accounts Payable
- Cash

For 5 among 6 projects the actual revenues are below the projected figures, whereas for one project, Iveria Ltd, the actual performance data for the year 2015 are not available, as the company started operations in early PY2016.

During the year 2015 the Georgian Lari devaluation was significant, thus the appreciation of the foreign exchange rate could be one of key reasons for the deviations in the values of the actual revenues, compared to the projected figures; however there might be other reasons as well. Further in this report, the issue of foreign exchange has been examined and discussed in details.

Table 1: Comparison of actual with projected revenues for the year 1 for six grant projects

#	Project Name	Actual Revenues (GEL), Yr1	Projected Revenues (GEL), Yr1
1	Alva Ltd	471,340	1,244,662
2	Agrokartli Ltd	6,390,138	10,787,901
3	Iveria Ltd	N/A	308,000
4	GBZ Ltd	9,519	788,408
5	IE Giorgi Tediashvili	50,000	89,500
6	Agropharm + Ltd	13,575	126,660

As differences between actual and projected data were significant, it was necessary to identify reasons for this deviation and afterwards decide whether to make adjustments for the following years or not. This analysis of the reasons will also allow to explore strategies for risk management over the remaining life of the projects.

If the deviation in the actual revenues for year one is due to unusual circumstances that occurred this year, then it is more reasonable not to revise and adjust the projected revenue stream over the life of the project. On the other hand, if there has been a fundamental change in the project, then it may be necessary to revise the profile of the projected revenues. One variable, that is out of the control of REAP, that has changed since the start of the REAP project is the foreign exchange rate.

Information for all 6 projects were collected from the different sources: grantees, REAP Activity Managers and other agricultural experts.

There are other reasons, rather than the exchange rate, why the actual revenues may be less than the projected ones. For example, delays in the timely implementation of the project due to prolonged procedures on obtaining some permissions, procurement of equipment or delays in construction works might led to deviations in figures.

Change of the foreign exchange rate

Since the start of the project, the exchange rate (GEL/US$) has depreciated from 1.74 to 2.46, this is likely to have had an impact on the future financial viability of projects. Projects that are export oriented have benefited as their revenues are in foreign currency, and their inputs are in domestic currency. However, projects that have revenues in local currency and expenditures in foreign currency, such as farm service centers (FSC), may experience difficulties.

In order to define to what extent the foreign exchange rate fluctuation has caused the impact and whether to adjust or not financial and economic parameters of the CBA model, interviews were conducted with selected grantees, and the relevant REAP activity managers.

It is very difficult to forecast the foreign exchange rate fluctuation in the remaining years. The scenario analysis can be utilized in order to assess the likely impact on the investment projects, and to explore ways to mitigate negative impacts caused by depreciation for projects that use imported inputs and their incomes are earned in local currency.

Assessment of the quality of data for the economic analysis

REAP M&E team conducted survey of 180 farmers (beneficiaries of REAP grantees), 30 farmers per each grant project. However, the information provided from some farmers was not precise. From the collected data, only 50% to 70% is higher quality and are used for analysis.

Below are results of the specific variables:

- **Estimation of the number of direct beneficiaries**

Grantees have provided consultations and trainings on new farming technologies to their beneficiary farmers. The number of farmers (direct beneficiaries) who have adopted and implemented these new technologies in their operations is an important indicator for the REAP project.

The assumption on the percentage of beneficiaries who implemented new technologies is defined by the grantee company, this assumption is verified in consultations with REAP experts. These figures vary from year to year and from the project to project depending on technologies that grantee company has provided consultancies/trainings on.

- **Use of hired labor**

With the adoption of new technologies, the productivity of farms is expected to increase, and the farmers will use more labor, both paid and unpaid. The use of additional hired labor is a measure of the increase in employment that is generated by the use of new inputs and technologies. Based on the total number of days per year that labor is hired, and the daily wage, the total annual wages paid to hired labor is calculated.

Based on these calculations, the value for the average wage per day varies slightly from region to region and is about 20 GEL. This figure is used as a measure of the economic opportunity cost of the labor for unskilled farm workers. The data on the opportunity cost of the unpaid labor is unreliable, therefore as a proxy, the average value for the hired labor (20 GEL) is used for this purposes.

- **Increase in crop yield %, by type of crops**

REAP M&E Team collected information on the % increase in crop yield by type of crop. Since farmers sometimes were not sure about the precise % increase, those numbers were verified in collaboration with REAP's agricultural experts and relevant adjustments were made where necessary.

- **Average gross profit margin per hectare, by different types of crops**

M&E Team collected information on the average gross profit margin per hectare. The gross profit margin takes in account the increased yields from the adoption of the new technologies and inputs.

- **Information on increase (%) in farmers' income**

It is difficult to obtain accurate information on the income of farmers. There was wide variation in the data on the wages paid to workers that were employed by surveyed farmers. The farmers reported an average of 21% increase in income, which have been verified with REAP's agricultural experts before computing projections for upcoming years.

- **Short-term agricultural training received**
  Estimated average value of training received

Surveyed farmers were asked of their best estimated value of the short-term agricultural training that was provided by REAP grantees. M&E Manager was able to come up with the total value of technical assistance provided to farmers in terms of free trainings and consultations by multiplying the average of that value by total number of trainings provided.

- **Gross margin versus net income**

The handbook for agriculture indicators (Feed the Future) states that the gross margin is a measure of the net income for the farmers. (See indicator title: 4.5 in Program Area for improved agricultural productivity). This assumption suggests that farmers are small-scale and do not have any capital investments in equipment and irrigation systems.

With the data from the Statistical Office of Georgia, it was calculated that the annual net income for the typical farmer is GEL 2,000, whereas income per household is about GEL 7,000. From the farmers survey, the average gross margin per ha is GEL 2,600, which makes sense, as households have other financial earnings apart from agricultural activity.

- **Estimated value of time saved per year**
  Opportunity cost per day per person

The adoption of new technologies means that farmers are able to save time to execute the same portion of work within less time span. REAP has no information on how farmers utilize the time they have saved while applying new technologies, however it can be assumed that every day this time will be used for some other beneficial activities and thus will enable farmers to earn more income.

- **Indirect beneficiaries receiving information**
  Indirect beneficiaries adopting new technologies

For both of the above indicators, the collected information through farmers' survey is more or less reliable. However it provides bases for further analysis in terms of diffusion rate and information distribution, which highly varies region by region based on the nature of social behavior or cultural patterns of the specific region.

- **Annual increase in yields**

The surveys of beneficiary farmers showed the average increase of yield of 30%. This figure has been verified with REAP's agricultural experts prior to including into the framework of Economic Cost Benefit Analyses.

Assumptions used in the analysis

Key assumptions are introduced in order to make long term projections necessary for Cost Benefit Analysis. While obtaining the actual data, projections for the remaining years can be adjusted. The three key assumptions (% increase in crop yield; % increase in income; % (out of 100 farmers) who adopted new technologies) have already been adjusted and are envisioned in the table below:

Table: Assumptions for the economic analysis

Grantee	Type of technology the grantee will use	year	% increase in crop-yield	% increase in income	REAP's contribution %[1]	% (out of 100 farmers) who adopt new technology
AGROKARTLI	Crop Genetics, Planting Density, Pest Management, Disease Management, Soil Analysis, Drip-Irrigation	BASELINE				
		2014	45%	30%	30%	30%
		2015	53%	33%	30%	35%
		2016	61%	36%	30%	40%
		2017	69%	39%	30%	45%
		2018	77%	42%	30%	50%
		2019	85%	45%	30%	55%
		2020	93%	48%	30%	60%
		2021	101%	51%	30%	65%
Grantee	**Type of technology the grantee will use**	**YEAR**	**% increase in crop-yield**	**% increase in income**	**REAP's contribution %**	**% (out of 100 farmers) who adopt new technology**
ALVA	Crop-genetics, Pest Management, Disease Management, Soil	BASELINE				
		2014	40%	20%	50%	25%
		2015	45%	24%	50%	35%
		2016	50%	28%	50%	45%

[1] Based on the ranking methodology, that allows to define REAP's attribution (%).It would be unrealistic to assert that all Financial and Economic benefits expected to be generated in eight years from now will take place only because of REAP's grant and technical assistance programs. As it is demonstrated in ranking system (discussed in detail in PY1 report) some grantees could have had some sort of activities without REAP and therefore they were classified into groups according to their historical performance data as Strong, Medium and Weak.
After calculating Financial and Economic NPVs it was decided to attribute to REAP:

- 30 % of overall achievements for Strong companies;
- 50 % of overall achievement in for Medium companies; and
- 70% of overall achievement in for Weak companies.

This kind of approach allows not to overvalue REAP's contribution and to more realistically suggest what economic value is attributable to 1 US Dollar of REAP's investment.

	Analysis, Drip-Irrigation	**2017**	55%	32%	50%	55%
		2018	60%	36%	50%	57%
		2019	65%	40%	50%	59%
		2020	70%	44%	50%	61%
		2021	75%	48%	50%	63%

Grantee	Type of technology the grantee will use	year	% increase in crop-yield	% increase in income	REAP's contribution %	% (out of 100 farmers) who adopt new technology
IVERIA	**Crop genetics, Pest and Disease Management, Soil Analysis, Drip-Irrigation, Planning density**	BASELINE				
		2014	20%	20%	50%	35%
		2015	29%	22%	50%	37%
		2016	38%	24%	50%	39%
		2017	47%	26%	50%	41%
		2018	56%	28%	50%	43%
		2019	65%	30%	50%	45%
		2020	74%	32%	50%	47%
		2021	83%	34%	50%	49%

Grantee	Type of technology the grantee will use	year	% increase in crop-yield	% increase in income	REAP's contribution %	% (out of 100 farmers) who adopt new technology
GBZ	**Crop genetics, Pest and Disease Management, Soil Analysis, Drip-Irrigation, Planning density**	BASELINE				
		2014	22%	20%	70%	35%
		2015	29%	22%	70%	37%
		2016	36%	24%	70%	39%
		2017	43%	26%	70%	41%
		2018	50%	27%	70%	42%
		2019	57%	28%	70%	43%
		2020	64%	29%	70%	44%
		2021	71%	30%	70%	45%

Grantee	Type of technology the grantee will use	year	% increase in crop-yield	% increase in income	REAP's contribution %	% (out of 100 farmers) who adopt new technology
Agropharm Plus	**Pest Management, Disease Management, Soil Analysis**	BASELINE				
		2014	30%	20%	70%	60%
		2015	33%	24%	70%	63%
		2016	36%	28%	70%	66%
		2017	39%	30%	70%	69%
		2018	42%	32%	70%	72%

		2019	45%	34%	70%	75%
		2020	48%	36%	70%	78%
		2021	51%	38%	70%	80%
Grantee	**Type of technology the grantee will use**	**year**	**% increase in crop-yield**	**% increase in income**	**REAP's contributi on %**	**% (out of 100 farmers) who adopt new technology**
TEDIASHVILI	**Crop Genetics, Irrigation, Planting Density, improved mechanical and physical preparation and harvesting**	BASELINE				
		2014	50%	20%	50%	40%
		2015	57%	23%	50%	45%
		2016	64%	26%	50%	50%
		2017	71%	29%	50%	55%
		2018	78%	32%	50%	60%
		2019	85%	35%	50%	65%
		2020	92%	38%	50%	70%
		2021	99%	41%	50%	75%

To ensure that assumptions utilized for the analysis were correct, the triangulation method was utilized by gathering and combining information from three different sources: grantees, farmers, and REAP activity managers and agricultural experts.

Guidance on aggregating and analyzing data for CBA

The full CBA was executed for the above mentioned six projects based on actual data provided by REAP grantees as well as collected though farmer surveys. In financial CBA model 100% of expected benefit created by grant project is attributed to REAP, while in economic CBA, the attribution is based on the ranking methodology developed by REAP M&E Manager and approved by USAID. The tabulated results on economic and financial parameters are provided below.

Table of NPV for all six projects:

			Actual	**REAP Attribution**	
FSCs / MSCs	**Alva**	FNPV	4,657,920	4,657,920	
		FIRR	16%		
		ENPV	25,293,937	12,646,968	50%
		EIRR	165%		
		Wages paid to farmers	16,660,331	8,330,166	
	Agrokartli	FNPV	25,668,061	25,668,061	
		FIRR	131%		
		ENPV	100,383,646	30,115,094	30%
		EIRR	323%		
		Wages paid to farmers	74,121,131	22,236,339	

Total	FNPV		GEL 30,325,981	$13,185,209
	ENPV		GEL 42,762,062	$18,592,201
	Wages paid to farmers		GEL 30,566,505	$13,289,785
				$45,067,195

			Actual	Attribution	
SMEPHP	Iveria	FNPV	621,762	621,762	
		FIRR	27%		
		ENPV	13,077,882	6,538,941	50%
		EIRR	120%		
		Wages paid to farmers	3,265,052	1,632,526	
	GBZ	FNPV	5,251,975	5,251,975	
		FIRR	37%		
		ENPV	856,900	599,830	70%
		EIRR	39%		
		Wages paid to farmers	1,199,356	839,549	
Total		FNPV		GEL 5,873,736	$2,553,798
		ENPV		GEL 7,138,771	$3,103,813
		Wages paid to farmers		GEL 2,472,075	$1,074,815
					$6,732,427

			Actual	Attribution	
PP	Tediashvili	FNPV	752,267	752,267	
		FIRR	147%		
		ENPV	3,449,493	1,724,746	50%
		EIRR	196%		
		Wages paid to farmers	225,147	112,573	
Total		FNPV	GEL 752,267	GEL 752,267	$327,073
		ENPV	GEL 3,449,493	GEL 1,724,746	$749,890
		Wages paid to farmers	GEL 225,147	GEL 112,573	$48,945
					$1,125,908

			Actual	Attribution	
ISP	Agro pharm+	FNPV	1,382,430	1,382,430	
		FIRR	76%		
		ENPV	2,724,340	1,907,038	70%
		EIRR	101%		
		Wages paid to farmers	84,431	59,101	
Total		FNPV	GEL 1,382,430	GEL 1,382,430	$601,056
		ENPV	GEL 2,724,340	GEL 1,907,038	$829,147
		Wages paid to farmers	GEL 84,431	GEL 59,101	$25,696
					$1,455,900

Based on data collected by the M&E team, the progress of each project has been discussed with the relevant grantee company. Comparison of actual revenues with projections for the Y1 has shown that five among six projects have had significantly lower revenues than it was anticipated. In-depth analysis and discussion with REAP's activity managers revealed probable reasons for the deviation. It appeared that all 5 projects have faced unexpected circumstances due to delays in equipment delivery (1) or in construction of new facilities (2). Hence the year 2015 can be considered as an unusual one and with a high probability it is expected that during upcoming years these grant projects will catch up in their performance. One grantee, "Iveria Ltd" has not performed activities in year 2015 and therefore projected data were utilized while conducting CBA.

Based on above mentioned circumstances it was decided not to adjust projections for the remaining years and only replace first year predictions with actual data. As a result, the preliminary picture on REAP's investment impact on assisted businesses and their beneficiaries is available.

Based on current calculations, over the 8 years of operations, REAP assisted 6 grant recipient companies are expected to generate:

- $13,185,209 – Financial NPV. This means that, at company's current value, it is expected to generate the abovementioned financial income.
- $18,592,201 – Economic NPV. This means that, at its current value, the company is expected to generate this monetary value of the economic impact
- $13,289,785 – wages paid to farmers by direct beneficiaries of REAP's grantee MSMEs

In total 2 FSCs/MSCs will create a benefit with the value of $45,067,195 over the 8 year time period.

Similarly, the impact of other businesses assisted by REAP will be:

Two Processing & Post-harvest handling Companies (SMEPHP) will create a benefit with the value of $6,732,427 over the 8 year time period;

One Primary Production company will create a benefit with the value of $1,125,908; and

One Information Provider (laboratory) will generate $1,455,900 of benefit.

In the next 30 months, REAP will continue to collect information on these six and the remaining 19 projects. At the end, information on 25 projects will be collected, and based on incremental CBA, REAP will be able to assess the relative effectiveness of grantees across the four strategic directions (FSC/MSC; PHHP; PP; and ISP) that REAP has supported.

Integrating CBA information into the Performance Monitoring Plan (PMP)

Integrating CBA indicators into the Performance Monitoring Plan (PMP) makes sense if the information can be collected in a timely fashion, and the information can be used to redesign and reorganize the project, if needed. The collection of actual data as well as making projection for the upcoming quarters will enable grantees to be proactive and forward looking. For example, on a quarterly basis, information on some selected indicators, such as sales, volume, output price, input

price, and gross margin could be collected. At the same time, the beneficiaries should make projections for these same indicators on a quarterly basis as well. The actual values for these indicators could be compared to the projected values, and if there are large deviations, then the project managers and the grantees can investigate the reasons for the deviations and make corrections to the project, if necessary.

This task is extremely difficult to accomplish with the financial and human resources allocated to M&E exercise in REAP. If full scale CBA is requested from the project, relevant resources should be envisioned and allocated for the activity from the beginning.

Lessons learned:

The lessons learnt from the REAP project are relevant for future USAID projects that will use CBA in the selection of investment projects.

Development of financial and economic indicators for the CBA

In the REAP project, the CBA indicators (both financial and economic) were selected **after** the financial model for investment projects was developed. In the future, the CBA indicators should be selected in conjunction with the development of the financial model. In this way, the desired CBA indicators can be directly integrated in the financial model. For example, if we wish to know the impacts on wages by skill level or gender, then the financial model should be constructed in such a way that the information can be easily derived from the financial model.

In the future, for the selection of the grant projects, an incremental CBA should be selected as a key component of the criteria. The incremental CBA measures the value of additional resources that are required for the projects. The use of the incremental CBA may require better planning and upfront resources in terms of funds and human capacity allocated, and could potentially delay the implementation of projects.

Financial and economic analysis

In case there is a requirement of cost benefit analysis to be conducted on a project level, the financial model from the beginning should envision all specific requirements of the CBA framework. Furthermore, sensitivity analyses should be conducted to identify the key risk variables for investment projects.