MRI-Syngenta is setting up new seedling production and propagation facilities
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Executive Summary

Feed the Future Partnering for Innovation is a USAID-funded program, implemented by Fintrac, that partners with agribusinesses to help them sell new agricultural products and services to smallholder farmers. These types of products and services support smallholders in improving their farming activities, increasing their incomes, and boosting their overall well-being.

At the start of FY2018, the program focused on closing out its remaining partnerships and winding down its activities with an end date of September 30, 2018. However, after receiving a 30 month extension until March 2021, Partnering for Innovation re-focused its priorities to begin developing new partnerships in coordination with the USAID Bureau for Food Security and target USAID Missions.

The Numbers

<table>
<thead>
<tr>
<th>FY 2018</th>
<th>Cumulative: FY 2012-2018</th>
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<tbody>
<tr>
<td>250,901 Farmers cultivating 201,798 hectares of land have benefited from partnerships</td>
<td>1,400,759 Farmers cultivating 482,417 hectares of land have benefited from partnerships</td>
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<td>24 Technologies and management practices commercialized, with $9.17 million in sales of technologies by partners</td>
<td>50 Partnerships in 17 countries through October 2018</td>
</tr>
<tr>
<td>$27,183,000 In leverage spent by partners to date, $5,003,000 invested by Partnering for Innovation</td>
<td>116 Technologies and management practices commercialized, with $99 million in sales of technologies by partners</td>
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<tr>
<td>$96,417,078 In leverage spent by partners to date, $42,105,832 invested by Partnering for Innovation</td>
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The Story

In FY2018, Partnering for Innovation began to close its portfolio of 50 partnerships across 17 countries. Companies such as Agro-Input Suppliers Limited (AISL) in Malawi and Tecnologia e Consultoria Agro-Pecuaria (TECAP) in Mozambique were reporting final sales numbers and submitting business strategies for future growth. Because FY2018 was to be the final year, the program also focused on documenting lessons learned from individual partnerships and the overall portfolio.

However, in mid-year the program was extended through March 2021, requiring a major pivot to not only close existing partnerships as planned, but also set the groundwork for entirely new partnerships.

As the team prepared for an additional 30 months of programming, ongoing partnerships continued to achieve commercialization success. Seed companies working with the African Agricultural Technology Foundation partnership sold 634 metric tons of StrigAway maize seed to 53,300 farmers in Kenya and Uganda. In Guatemala, a partnership with Popoyán to sell biological pest control products to smallholder farmers gained an eight percent share of the plant pesticide market and also won the Concordia P3 Impact People’s Choice Award.

Twenty-seven partners and sub-partners received acceleration services to help position their companies to receive private investment, inclusive of customer surveys that recommended improvements to marketing strategies, and training that expanded investor-readiness.

The program produced an in-depth study, Designing Agriculture Research that Leads to Commercialization, that provides strategies for commercializing publicly-funded agricultural research.

Concurrently, Partnering for Innovation updated its solicitation, due diligence, and negotiation processes based on lessons learned to assess partners’ leadership capacity and profit potential, and developed a diagnostic tool to better tailor acceleration services going forward.

Finally, the program released four new funding solicitations in just the last quarter:

- **Global Resiliency**: A total of 121 companies applied with technologies and services to strengthen smallholder farmer capacity to respond to risks and shocks such as drought, floods, pests and disease, and volatile markets.
- **Cambodia**: Thirteen companies submitted applications to commercialize products and services and three advanced to due diligence and negotiation stages.
- **Latin America and the Caribbean**: Out of seven companies, two advanced to the due diligence stage for providing agricultural support services, supply chain management services, and input distribution systems in smallholder farmer markets.
- **Mozambique**: Ten companies applied to a market systems bid and one company advanced to the due diligence and negotiation stage.
1. Technology Commercialization

The technology commercialization component focused on closing out partnerships aimed at commercializing off-the-shelf agricultural technologies in smallholder markets.

<table>
<thead>
<tr>
<th>Active partnerships during reporting period</th>
<th>Completed partnerships</th>
<th>Current countries; 13 total</th>
<th>Farmers impacted to date</th>
<th>Program funding to date</th>
<th>Partner leverage spent to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>21</td>
<td>2</td>
<td>1,123,707</td>
<td>$10.4 million</td>
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</tbody>
</table>

Highlight

Popoyán

Agricultural input supplier Popoyán established a state-of-the-art production lab and is now producing and commercializing the first biological control products on the Guatemalan market. While these products are more effective and safer for the environment, many farmers were accustomed to using chemical inputs and were reluctant to try the biological products. To build demand for its biological products, Popoyán invested heavily in field days, demonstration plots, and trainings.

Lead farmers such as Marvin Cardona were key to Popoyán’s success. Marvin became a change-maker in his community by using the company’s products on his fields, doubling his productivity as a result.

Farmer spraying his field with Popoyán products. In just two years, the company increased its pest product market share in Guatemala from 0 to 8 percent.
Feed the Future Partnering for Innovation partnerships benefited **more than 1 million smallholder farmers accessing improved technologies**. These partners sold new products such as **improved seeds, inoculants to enhance nitrogen fixation, and postharvest storage for fruits, vegetables and dairy products**. Most partners met or exceeded their sales targets as proof of the business viability of marketing in the challenging smallholder market.

In addition to financing the program provided acceleration services in business strategy development, market assessment, and investment readiness.

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**Progress toward Technology Commercialization Goals**

**Progress toward Sales Goals**
Technology Commercialization Partner Sales in FY2018

<table>
<thead>
<tr>
<th>Partner</th>
<th>Sales Goal (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AATF</td>
<td>100</td>
</tr>
<tr>
<td>AISL</td>
<td>80</td>
</tr>
<tr>
<td>MEA</td>
<td>120</td>
</tr>
<tr>
<td>Store It Cold</td>
<td>140</td>
</tr>
<tr>
<td>Stewards Globe Ltd.</td>
<td>180</td>
</tr>
<tr>
<td>Promethean Power</td>
<td>120</td>
</tr>
</tbody>
</table>

*Twiga Foods is not included because it does not have sales milestones.*
**Background**

StrigAway is an imazapyr-resistant maize seed (IR maize) developed by the International Maize and Wheat Improvement Center (CIMMYT). It is coated in the herbicide imazapyr, which kills the growth of striga, a parasitic weed that infests 1.4 million hectares of Kenyan, Tanzanian, and Ugandan farmland. For smallholder farmers, a striga infestation can mean up to a 100 percent loss of maize, a key staple food crop in this region. The partnership with AATF worked with CIMMYT, pest product company BASF, and seven seed companies – Kenya Seed Company, Freshco, Elgon, Tanseed, Meru Agro, NASECO, and Victoria Seeds – to increase StrigAway production and commercial distribution with the goal of eradication of striga in smallholder farmer fields. AATF provided training, technical assistance, and funding to establish a network of demonstration sites. It also purchased seed treatment equipment for three seed companies to safely apply the herbicide, as well as improved packaging and labeling to inform seed buyers of the proper handling of StrigAway.

The AATF partnership was one of the most complex ones the program funded. The seed companies experienced difficulties in growing certified seed for sale, delays in the importation and installation of equipment, and steep learning curves in packaging and marketing StrigAway seed. These setbacks required several modifications, including a one year extension to support the roll-out, demonstration, and sale of the new seeds.

**FY18 Results**

AATF worked with each seed company to establish a network of 3,000 demonstration plots to show the impact of StrigAway on eradicating striga. AATF developed technical materials and conducted more than 40 trainings with 600 agrodealers in Tanzania, Uganda, and Kenya. These trainings built agrodealers’ knowledge of safe handling, storage, and performance characteristics of IR maize so they could better market the product to farmers.

NASECO, Freshco, and Kenya Seed, each exceeded their production goals producing a total of 688 tons, proving the long-term commercial viability of the StrigAway seed variety. The three seed companies also exceeded their sales milestones, selling 634 tons of IR maize in Kenya and Uganda (Kenya Seed 146 MT; Freshco 327 MT; NASECO 160 MT). **This total amount of StrigAway was sufficient to plant 13,600 hectares and represented a 400 percent increase from AATF’s first year of sales.**

Overall, the AATF partnership demonstrated healthy demand from smallholder farmers that further established a case for NASECO, Freshco, and Kenya Seed to continue production and sales.

**Going Forward**

Three of the seven seed companies that AATF worked with under the partnership will continue to produce and market StrigAway. Some of the smaller seed companies like Meru Agro and Elgon may continue to pursue the market, but face significant capacity and resource constraints. AATF will no longer work directly on the striga maize program, but has reported that it is incorporating the IR trait in drought-tolerant maize it is promoting in East Africa under a Gates-funded program.
Background

Approximately two-thirds of Malawi's farmland suffers from severe soil degradation affecting crop yields and sustainable agriculture. Agro-Input Suppliers Limited (AISL), in partnership with the Malawi Department of Agriculture Research and the International Institute of Tropical Agriculture, worked to commercialize Nitrofix to overcome this challenge. Nitrofix is a legume inoculant that contains rhizobia, a symbiotic bacteria that affixes to the root system of legumes and boosts the plant's nitrogen fixation abilities, thereby improving soil quality and yields. Nitrofix was specifically developed for the climate and legume varieties grown in Malawi. By using Nitrofix, a less costly alternative to nitrogen fertilizers, farmers save money and improve the quality of their soils.

FY18 Results

AISL marketed Nitrofix through live demonstrations in smallholder fields, displaying the benefits of inoculant in terms of increased production and plant health. AISL invested in new warehouses and logistic hubs to serve as one-stop shops closer to final sale points. It also formed partnerships with outside retailers, including Rab Processors, to expand its distribution network both regionally and nationally. In addition, it formed a partnership with the Agriculture Commodity Exchange (ACE) so that AISL can offer its customers offtaking services.

AISL completed construction of a permanent laboratory to double its production capacity and expanded its product offering to groundnut and common bean inoculant. The laboratory enabled AISL to introduce a new bulk mixing process, allowing the rhizobium to live longer without refrigeration. The bulk mixing was a key improvement for marketing Nitrofix to remote areas.

Under this partnership, AISL sold 514,744 50-gram sachets of soybean inoculant totaling $200,000 to more than 82,000 farmers.

Going Forward

AISL is expanding regionally, with a focus on Mozambique and Zambia, where there are no other competitors producing or selling legume inoculant. To support its expansion strategy, Partnering for Innovation provided acceleration support services from Open Capital Advisors to help AISL prepare for and identify outside commercial investors, and it is currently in conversations with several investors.
Background

To meet high demand among Kenyan farmers for MEA’s BIOFIX product, Partnering for Innovation worked with MEA to increase product available by 50 percent. BIOFIX, a rhizobium inoculant for legumes that increases yields by up to 40 percent, was developed for specific legume varieties and soils in Kenya. BIOFIX enhances legumes’ natural nitrogen fixation and eliminates the need for nitrogen fertilizers, which smallholder farmers have difficulty accessing.

Over the five-year partnership, MEA expanded its factory by introducing a bulk mixing production process to increase production and reduce production time from 21 to seven days. MEA also built demonstration plots, farmer training, and after-sales support.

FY 2018 Results

MEA developed a liquid formulation of BIOFIX for commercial launch because they learned that this is simpler for smallholder farmers to use and has a longer shelf life than powdered versions it was selling.

The partnership with MEA was originally scheduled to end in December 2016, but due to startup delays in importing and installing the new factory equipment needed to produce BIOFIX, it was extended for two additional growing seasons. Shortly after this extension was negotiated, the key champion of BIOFIX within MEA left the company there were further delays in appointing and training a replacement manager to lead the BIOFiX campaign. Although smallholder uptake of BIOFiX is increasing based on final sales data, MEA failed to deliver the modified sales deadlines, as well as the delivery of its five-year business strategy.

Going Forward

Since MEA has the production capacity and a non-competitive market, it plans to continue to produce and market BIOFiX. It remains to be seen, given that its major business line is inorganic fertilizers, whether the company will dedicate the leadership and resources that are needed to grow the inoculant product line.

BIOFiX is a legume inoculant that boosts legumes’ natural nitrogen fixation.

3,202 legume farmers applied BIOFiX to their crops on 640 acres of land.

October 2015 – February 2018 (completed)

Program Funding $432,131
Partner Leverage $119,908

Kenya
Promethean Power Systems

Bangladesh

Providing 440 smallholder farmers with commercial access to cold chain service to date.

March 2017 –
August 2019
(extended)

Small-scale milk chillers dramatically reduce spoilage and improve milk quality, allowing farmers to earn more for better-quality milk.

Background

US-based Promethean Power Systems is introducing milk chillers to dairy processors in Bangladesh that source from smallholder farmers. Promethean’s off-grid cold storage solution can be used by dairy processing companies in villages with inconsistent electricity. Individual farmers, who typically rely on local collection centers that store only small quantities of milk, also benefit from access to the chillers. It enables them to maintain quality and quantity for selling to formal markets, particularly given the lack of affordable cold chain options at the village level. As part of the partnership, the company established a local management and technical team, identified and developed business relationships with key dairy processors, and marketed the milk chillers.

FY 2018 Results

Promethean trained 50 dairy company personnel on various aspects of clean milk production and the importance of chilling milk to retain its quality, revised the manufacturing process for its milk chiller, sourced local materials to reduce production costs, monitored the performance of the current set of demonstration milk chillers, and conducted a public messaging and awareness campaign. It also set up 10 demonstration chillers in affiliation with local dairy companies.

At the same time, a World Bank-funded program began to address constraints to investment in the dairy industry, including the development of a more extensive cold chain. Promethean participated in the program set up and requested a one-year extension to align its sales target of 65 village-level milk chillers with its business plans.

Going Forward

The no-cost extension to August 2019 allows more time for Promethean to sell the farm-level milk chiller units, and to align with larger industry changes in reaching its target of 3,000 smallholder farmers.
Stewards Globe

Background

Stewards Globe, the largest supplier of legume and sunflower seeds in Zambia and a woman-owned company, wanted to increase production of its certified groundnut, soybean, common bean, sunflower, and cowpea seed varieties through a smallholder outgrower scheme. It increased brand awareness in new markets through demonstration plots, field days, and market promotions.

Stewards Globe’s success with this partnership was due to its sales expansion to new regions and its updated distribution strategies. Specifically, Stewards Globe gathered customer data to better respond to their preferences and needs. Partnering for Innovation provided assistance in designing and conducting a customer survey which resulted in Stewards focusing more of its marketing resources on developing a broader agrodealer network for its seeds.

FY 2018 Results

Stewards Globe doubled its production capacity resulting in selling 635 tons of improved legume varieties to 124,000 smallholder farmers during the partnership. They have also expanded their agrodealer network so that its improved varieties are distributed throughout Zambia.

Stewards Globe invested in new seed production equipment to enabled the company to clean, treat, and package larger volumes of seed. However, they did not meet this milestone because the equipment arrived after the end of the agreement in April 2018. Stewards Globe reported that the equipment installation was completed later in the year.

Going Forward

With the installation of the new equipment, Stewards Globe will produce and distribute to 10 new hubs in Muchinga, Northern, Copperbelt, and Eastern provinces in the 2018/2019 season. Though a good sign, distribution and sales of the Stewards Globe brand remains a key challenge to scaling across Zambia. Since much of its seed is sold on consignment to agrodealers, unsold consigned seed is returned to Stewards Globe and is unable to be resold. Reducing these losses requires better demand forecasting and more frequent deliveries to agrodealers.

It also received investment advisory assistance from subcontractor Open Capital and is actively seeking commercial financing for expansion. This will be particularly important as Stewards Globe moves towards reaching its 10 new hubs in four provinces over the next five years.
Background

US-based company Store It Cold partnered with Partnering for Innovation to commercialize the CoolBot to Honduran smallholders. The CoolBot is an affordable cold storage unit that lowers and regulates the temperature of an insulated room by connecting to a standard window air conditioning unit, reducing installation costs for customers by 80 percent and operational costs (primarily electricity) by 40 percent.

With Partnering for Innovation funding Store it Cold later expanded to Guatemala where smallholder farmers face similar agricultural challenges. Store It Cold used the expansion opportunity to test a variation of its Honduras distribution strategy, this time selling the CoolBots through third-party vendors with established construction networks in Guatemala.

FY 2018 Results

In Honduras and Guatemala, Store It Cold exceeded its goals, selling more than 95 CoolBots to businesses in the agriculture and food retail sectors. Customers included large international and national agribusinesses, restaurants, convenience stores, and supermarkets. Store It Cold also expanded into dairy, agricultural inputs, meat, and seafood sectors.

Customer data collected by Partnering for Innovation estimates that Store It Cold impacted nearly 46,000 smallholder farmers whose crops were stored using this cold storage technology. Through strategic partnerships with organizations like Banrural, a Honduran microfinance institution, and CAHLE, a union of milk producers, Store It Cold tapped into new markets for CoolBot and developed brand recognition as an affordable and effective cold storage solution. When comparing distribution strategies in Honduras and Guatemala, Store It Cold learned the cost and risk associated with direct distribution of CoolBots was prohibitively high. Customers preferred a complete turnkey cold store solution rather than “build-it-yourself” packages. The turnkey solution also led to larger gross margins to Store It Cold and its local partners.

Going Forward

In Guatemala and Honduras, Store It Cold will continue to build a network of local commercial distributors. In this way, the company will continue to reduce its costs and risks while expanding sales in the region. It will license it to its current sales representatives who will own and manage cold storage companies to act as independent distributors for Store It Cold, empowering local distributors that ultimately contribute to job creation along agriculture value chains.

Mobile CoolBot units are a practical and affordable cold storage solution.
**Twiga Foods**

- Increased the number of smallholder farmers from whom it sources fresh produce by 4,971.
- Kenya
- March 2017 – August 2018 (completed)
- Partner Leverage: $707,800
- Program Funding: $689,432

**Background**

Twiga Foods, a Kenyan company using a mobile business-to-business (B2B) platform to connect smallholder farmers to informal urban produce markets, addresses the high cost of fresh produce in urban areas, as well as the inefficiencies and food waste inherent in a traditional multiplayer fresh produce market chain. With support from Feed the Future Partnering for Innovation, Twiga expanded its network of rural collection centers from 10 to 16. Through this expanded network, it trained nearly 4,400 smallholder farmers in production and postharvest handling to be part of their fresh fruit and vegetable supplier network for the Nairobi market.

The expansion enabled Twiga to provide a consistent market for more farmers. It also provided urban retailers with a reliable supply of quality, affordable produce for its customers. Its warehouse in Nairobi consolidated fresh produce from Twiga collection centers and sorted, packaged, and made daily deliveries to 1,800 shopkeepers and street side vendors. A benefit the Twiga B2B platform is that it generates rich data that helped to inform Twiga’s response to rapidly changing market dynamics by providing real-time data on customer orders and supplier volumes.

**FY 2018 Results**

Twiga has contracts with 2,300 fresh fruit and vegetable vendors in Nairobi and added new crops to its product list including banana, tomato, capsicum, pawpaw, and pineapple, as well as additional seasonal options. However, Twiga struggled to complete the construction of the planned 25 new collection centers due to delays in governmental permit approvals and construction scheduling, completing only six. Twiga did not meet its milestone for increasing its smallholder suppliers to 7,500, primarily due to construction delays that affected its expansion plans. However, it increased its purchases from current farmers to more than 17,000 metric tons of produce.

Twiga’s work in the past year demonstrated more demand in Nairobi than originally anticipated, and as a result it concentrated on expanding its supplier network. To manage this expansion, Twiga deployed a team to investigate smallholder suppliers’ challenges and learned that its field agents did not always purchase from contracted farmers, which hurt Twiga’s reputation among contracted farmer groups. Farmer group identification, smallholder training, and establishment of new collection hubs are acknowledged by Twiga to be critical for meeting market growth they are experiencing in Nairobi.

Finally, investor Wamda Capital acquired equity shares in Twiga, which changed the company’s majority ownership from Kenyan to non-Kenyan. This has made it more difficult for Twiga to acquire land needed for their supplier expansion. Twiga will work through third parties and its legal team to acquire the land needed to build new collection centers and depots.

**Going Forward**

Twiga’s strategic plan calls for expansion to 47 collection centers in the coming two years, sourcing product from 9,500 smallholders, and supplying 15,000 vendors weekly. Beginning in year three it will expand its footprint into a new market such as Mombasa, Dar es Salaam, and Lagos.
2. Mission Partnerships

Partnering for Innovation provided USAID Missions with a more efficient way to engage the private sector by identifying and managing public private partnerships that support Mission agriculture and food security goals.

<table>
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<th>19</th>
<th>20</th>
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<th>277,052</th>
<th>$31.6 million</th>
<th>$85.9 million</th>
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</thead>
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<tr>
<td>Active partnerships</td>
<td>Completed partnerships</td>
<td>Current countries</td>
<td>Farmers impacted</td>
<td>Program funding to date</td>
<td>Partner leverage spent to date</td>
</tr>
</tbody>
</table>

Highlight

Tecnologia e Consultoria Agro-Pecuaria (TECAP)

Mozambique has a very limited input supply network in key agriculture production areas of the country. Through its partnership with Partnering for Innovation, Tecnologia e Consultoria Agro-Pecuaria (TECAP) established three new retail super-stores in the regional capitals of Tete, Nampula, and Manica provinces. Through these regional hubs, TECAP trained 250 agrodealers that sell seeds, fertilizers, pest management, veterinarian and mechanization products through a network of 70 retail shops. Retail sales of these products totaled more than $3 million to nearly 46,000 farmers over the two-year partnership.
Mission Profile: Benin

Benin’s strategy for developing its agriculture sector focused on promoting entrepreneurship; strengthening value-added activities; obtaining investment that will establish the infrastructure needed for a competitive agriculture sector; and diversifying agricultural products. With a focus on smallholder farmers, particularly women, USAID supported partnerships to develop Benin’s agriculture sector and spur economic growth that increases productivity, employment, and incomes while reducing hunger, poverty, and malnutrition. USAID/Benin and Feed the Future Partnering for Innovation achieved their goal of working with commercial partners to promote agricultural development by leveraging the expertise of commercial partnerships to benefit smallholder farmers in productive and profitable ways.

Through September 2018, 3,230 cashew farmers were trained through the partnership in Benin.
Tolaro Global

- Sourced raw cashews from a cooperative of 3,230 smallholder farmers and provided agronomic training
- Became organic certified through partnership assistance
- Paid Fair Trade certified prices to members for raw nuts
- Provide farmers with equity ownership in Tolaro

Background

Through this partnership, Tolaro established an organic and Fair Trade certified cashew roasting, seasoning, and packaging plant to sell retail quality cashews to international markets. Tolaro’s product and sourcing methods brought value-added processing to Benin, which is located in a region responsible for 40 percent of global cashew production but which is exported unprocessed. It helped bring new opportunities to Benin’s exporters and smallholder growers, who were missing out on significant value-added income from in-country processing of raw cashew nuts.

Tolaro created an equity ownership arrangement for the 3,200 cooperative members selling their cashews to the plant. By making smallholder farmers into shareholders, Tolaro provided additional benefits to, and receives loyalty from, its owner-farmers.

FY 2018 Results

In January 2018, Tolaro completed its roasting and seasoning facility, enabling it to start a new product line of roasted and seasoned cashews for export to markets in the United States and Europe. The facility is one of the first of its kind in Benin and has been designed to meet North American and European standards for food production. As with Tolaro’s existing primary processing line, the cashews for the new roasted and seasoned line are sourced from Tolaro’s contracted farmer cooperatives, which are trained in good agricultural practices, harvesting, and storage.

The 2018 results contributed to total cashew purchases from 3,230 farmers at Fair Trade premiums. After roasting and seasoning, these cashews were sold for $100,000 in May 2018, meeting its target for the partnership.

These results did not come without challenges. Specifically, Tolaro faced a number of delays related to the establishment of the new roasting and seasoning facility. The most significant delays were from equipment not being delivered on time. This delay in processing capacity affected the volume of nuts purchased from smallholder farmers and thus the sales numbers. However, Tolaro developed additional relationships with a number of buyers, including securing purchase contracts with General Mills in the US. Now that production is up and running, the company has a number of large orders to fill. This includes co-packing agreements which consigns bulk cashews to larger companies to be packaged under well-known labels. It is also pursuing sales agreements where the custom-package orders for brand names which returns higher margins to the company.

Going Forward

Tolaro will develop and market under its own label in the future. Tolaro Global Rotissage is a new business unit for Tolaro Global that will engage the market as a bulk roaster for existing brands. Once Tolaro has British Retail Consortium (BRC) certification, they plan to add private label retail packages and add their own brand of retailed packaged products, producing and marketing seasoned, organic, fair trade cashews for the US and European markets.

$1,610,034

- Program Funding $772,514
- Partner Leverage $837,520
Partnering for Innovation worked with USAID/Guatemala to engage private sector partners in expanding commercial access to transformational agricultural inputs and technologies for smallholder farmers, specifically focused on generating employment opportunities for youth in agriculture.

Guatemala’s overall potential for expanding its agricultural production as a major exporter to the US and EU of non-traditional crops such as snow peas, green beans, and baby vegetables is an ongoing driver of USAID/Guatemala’s strategy. The partnerships in Guatemala complemented the strategy and met or exceeded sales targets.

Through September 2018, 6,123 farmers have accessed new technologies through partnerships in Guatemala.

*Mercy Corps is not included because it does not have sales milestones.*
Background

Through this partnership, Mercy Corps worked with Guatemalan exporter Fair-Fruit to organize youth savings and loan groups in Guatemala’s Western Highlands. This strategy increased access to credit, which is then used to unlock jobs and income generation potential among youth. Unlike other savings and loan groups, participating youth were encouraged to purchase agricultural technologies and learn good agricultural practices to improve their farm productivity and income. In addition, Mercy Corps engaged Rana Labs, a digital media company, to train youth on the use of basic smartphone technologies to produce videos on good agricultural practices. As a result, videos serve as resources for extension training and for promoting the benefits of youth savings and loan groups.

FY 2018 Results

As a result of this partnership, Mercy Corps organized 1,060 youth into 64 savings and loan groups, resulting in the following:

• 40 savings and loan groups established private sector connections, primarily through Fair-Fruit
• 40 constructed demonstration plots showcasing agricultural technologies, ranging from low-cost greenhouse infrastructure to integrated pest management techniques
• Group members saved $125,431 and disbursed 1,030 loans valued at $101,512 to date
• Mercy Corps completed 58 youth exchanges on a variety of topics, including good agricultural practices for vegetable and coffee production, and use of drip irrigation systems

In collaboration with Rana Labs, Mercy Corps conducted six basic and two advanced video production courses. As a result of these courses, participating youth produced 35 videos on good agricultural practice topics that can be used for agricultural extension. These videos have been showcased in two film festivals that Mercy Corps hosted for private sector stakeholders.

Mercy Corps completed an impact analysis to assess the effectiveness of market linkages and the role of demonstration plots in youth purchasing habits. The results showed that while many youth appreciated the value of improved technology and better market linkages, two barriers limited their ability to purchase inputs and grow their operations to sufficient scale:

• Many youth had limited or no access to their own land and could not produce to scale needed to supply large buyers
• Several technologies required significant upfront costs that exceeded the savings and loan group borrowing limits

Mercy Corps responded to these barriers by connecting them to larger cooperatives that have formal contracts with exporters like Fair-Fruit. Mercy Corps believes that this strategy will provide opportunities for those youth that are serious about farming to access these formal supplier networks to expand their operations.

Going Forward

Many of the youth groups are planning to continue their farming and savings group activities post-Mercy Corps support. Alternatives to conventional financing can also spur benefits using tried-and-true group savings methodologies.
Popoyán

- Trained 5,880 smallholder farmers
- Stimulated sales of $321,416 to 2,845 smallholder farmers

Guatemala

June 2015 – September 2018 (completed)

$4,249,685

Program Funding $2,107,384
Partner Leverage $2,142,301

Background

Popoyán, a leading agriculture input supplier in Guatemala, produced, marketed, and sold beneficial insects and other biological pest control products in Guatemala and regionally. Such products enabled farmers to meet changing export market trends that require reductions in the use of agrochemicals. Such trends have increased demand for alternatives to traditional pesticides.

Popoyán was able to showcase the benefits of using its biological products in ways that boosted economic returns to smallholder farmers, particularly youth. In the last year of the partnership, Popoyán pivoted to working through established commercial distributors while maintaining its lead farmer network to break into new communities. The company learned that lead farmers are integral to reaching initial customers and that commercial distributors enable it to reach scale.

FY 2018 Results

Popoyán exceeded its final sales goals to sell $321,416 worth of biological control products. The company increased its market share from 0 to 8 percent for pest management products. It trained 5,880 smallholder farmers and 295 lead farmers, and planted 246 demonstration plots. Notably, Popoyán completed its three-year cost-benefit analysis in FY18. The calculations showed that farmers using Popoyán's biological products instead of traditional chemical pest products consistently reduced their overall cost of pest control and increased on-farm productivity. For example, green bean farmers experienced a 41 percent average increase in productivity and 13 percent decrease in cost; in peppers, farmers saw a 25 percent increase in productivity and a 3 percent decrease in costs, resulting in more net income for both crops.

Popoyán decided to pivot its distribution model from exclusively using lead farmers to also including agrodealers for product promotion. It found that lead farmers required a significant upfront investment and extensive training to become profitable commissioned sales agents. Larger distributors and local agrodealers require less training and already have a customer base. In order to incentivize agrodealers to promote biologicals, Popoyán offered higher commissions to sell its products as compared to what the chemical companies pay. In order to diversify its market, Popoyán is also targeting larger agricultural concerns, such as sugarcane and palm oil, which also helps drive down costs of production that is passed on to all of its customers.

The partnership with Popoyán won the Concordia P3 Impact People’s Choice Award in late September. It was selected as an example of how the public and private sectors find solutions to development challenges that ultimately benefit environmental and social well-being of communities while generating business profits.

Going Forward

Over the next five years, Popoyán intends to grow by 15 percent per year in Guatemala and expand regionally into El Salvador, Honduras, Panama, the Dominican Republic, Colombia, and Chile. Popoyán will continue to work with lead farmers when entering new communities that are unfamiliar with biological control products.
Improved access to quality potato seed for 2,218 producers, mostly youth, increasing productivity and incomes.

Guatemala

May 2016 – August 2018 (completed)

$1,681,270

$1,481,558

Program Funding

Partner Leverage

$3,162,828

Background

Guatemala is Central America’s largest producer of potatoes yet only 5 percent of farmers use certified seed, which provided a market opportunity for Servicios de Post-Cosecha to introduce new varieties sold under its Papais brand. Post-Cosecha, with funding from Partnering for Innovation and technical support from the International Potato Center (CIP), established a laboratory, nursery, and greenhouse to produce certified seed in the Western Highlands. Additionally, Post-Cosecha and local partners Dayco and Asociación de Organizaciones de los Cuchumatanes (ASOCUCH) recruited and trained seed outgrowers to grow certified seed and established direct market access to buyers of the improved seed. Post-Cosecha also established a permanent potato seed laboratory in the Western Highlands to produce new varieties for the market.

FY 2018 Results

Post-Cosecha held 150 demonstration days to train local farmers on potato planting, mid-production integrated pest management, and proper harvest and postharvest management. Post-Cosecha also achieved its first two sales milestones, setting itself up for success for the rest of the partnership. It did face challenges keeping on schedule with construction and installing equipment in its seed laboratory. Post-Cosecha experienced high losses in its first crop at the new laboratory, but with in-house expertise and support from CIP, it learned how to better control the pests in the greenhouse environment.

Post-Cosecha achieved its cumulative sales milestone for certified potato seed, reaching 2,218 new customers in the Western Highlands, 75 percent of them youth (ages 15-24). With its high-tech lab up and running, it now has the capacity to supply Western Highlands farmers with the highest quality seed in the market.

Going Forward

Post-Cosecha plans to grow seeds on contract for commercial potato producers, as well as explore potato offtaking from its seed customers in order to sell into local retail outlets. This will allow the company to diversity its sales and increase cash flows. In the medium term, Post-Cosecha plans to produce potatoes for fast-food companies, which currently import potatoes that meet its internal varietal standards.

Servicios de Post-Cosecha is expanding access to improved potato seed in Guatemala.
Feed the Future Partnering for Innovation worked with the USAID Bureau for Latin America and the Caribbean (LAC) to promote compliance with food safety standards and ensure continued market access for smallholder farmers. The goal was to align the region's strategic location near the large United States market.

Increased investment in smallholder farmers in rural areas contributed to improved ability to capitalize on export potential among LAC countries. Both Solutions SA and Farmforce made headway toward expanding the sales of technologies, and as a result of their partnerships with the program, are continuing to expand in the region. The LAC Bureau reinvested in the program’s two-year extension.

Through September 2018, 10,514 farmers used new technologies through partnerships in Latin America and the Caribbean.
Background

Farmforce provided full electronic traceability at the farm level to exporters and aimed to increase its sales across LAC. The traceability software enabled Guatemalan exporters to reduce rejections at the border, securing markets for smallholder farmers. Originally, the partnership focused on sales through basic subscription services - the more subscriptions sold, the more exporters and other Farmforce clients integrated traceability into their systems that ultimately benefited Guatemalan smallholder farmers.

FY 2018 Results

In total, Farmforce made six new sales in FY2018: one to a chili and avocado exporter in the Dominican Republic, another to a Salvadoran horticultural exporter, two to Guatemalan vegetable exporters, one to a Colombian cacao exporter, and one to a Guatemalan coffee exporter. Farmforce redoubled its efforts to train and provide customer support to clients to help them fully integrate their businesses into the technology, and to expand the number of farmers covered by the technology. However, subscriptions among existing clients began declining in FY2018.

Therefore, Partnering for Innovation modified the agreement with Farmforce to include a focus on repeat customers to pursue more aggressive viability of the traceability solution. The modification included a new milestone requiring Farmforce to show sustained usage of the technology by 13 of 17 clients at the partnership’s end.

With the modifications in place, Farmforce reinforced customer service activities with exporter field agents to demonstrate the effectiveness of the software on product tracking and cost reduction. As a result, Farmforce met its final sales and usage milestones.

Going Forward

The recent sale to the Colombian cacao exporter builds on the extensive footprint of Farmforce in the region and the company plans to generate additional business in the South American cacao market. The team will continue to pursue leads in the Latin America and Caribbean region, and will support its efforts outside the region remotely as well. However, it remains to be seen if Farmforce can continue to strengthen retention of existing clients and scale to other countries without the full implementation of the new US Food Safety Modernization Act (FSMA), which will create an important regulatory incentive for export businesses to use better traceability systems.

Farmforce is a traceability software system that is being used by Guatemalan exporters.
Solutions SA

More than 2,515 smallholder mango farmers in the new business cells received a price premium from exporters and continued access for their products to the US market.

Haiti

March 2017 – July 2019 (extended)

$655,681

Program Funding $376,491
Partner Leverage $279,190

Background

Through this partnership, Solutions, a Haitian IT company, with sub-partner GeoNova, is improving the export mango supply chain in Haiti by organizing growers into trained producer groups and establishing a geotraceable database for each farmer member as well as training members in good agricultural practices, improved harvesting, and postharvest handling. Using its proprietary tracking software, Solutions is providing full electronic traceability back to the smallholder farm for mangos grown by each assisted producer group, ensuring compliance with new US Food Safety Modernization Act (FSMA) regulations. The partnership targets for Solutions and GeoNova include registering 9,000 farmers comprising 300 producer groups in the agro tracking traceability system and reaching sales of 400,000 traceable cartons of mangoes to the export market.

FY 2018 Results

In 2017 Haiti suffered hurricane damage in some production areas in the north of the country, which pushed back the start of the 2018 mango harvest by more than two months and reduced the overall yields. The late start of the mango season eroded Haiti’s seasonal advantage over Mexico, where the harvest starts later. Haiti generally cannot compete with Mexico, which makes an early harvest critical.

Despite these setbacks, which included a 75 percent drop in overall mango exports, Solutions was able to register new business cells and track harvests during the 2018 season. It registered 200 new cells, on top of the 100 cells registered the prior year, with a total of 8,800 registered members. These business cells form the backbone of Solutions’ business plan to clean, grade, and sell traceable mangoes to at least two exporters.

It distributed postharvest equipment to the cells, trained them in pruning, mulching, and harvesting techniques, and provided smartphones to producers to enter data into the tracking system. For the 2018 season Solutions has recorded sales of 126,679 cartons of mangoes to two exporters. These mangos are traceable back to 2,515 smallholder farmers who are members of 59 registered business cells. It also began talks with a third mango export plant in Port-au-Prince to continue to expand the market for its registered farmers’ mangos.

As a result of the dramatic drop in production this season, Partnering for Innovation modified Solutions’ agreement to extend it for one year to July 2019. This provides Solutions with the opportunity to test the agro tracking system during a stronger mango season, which will provide a trajectory for its viability in the Haitian mango market. It also provides an opportunity for the company to meet its final partnership sales milestone, which was not possible given the low productivity this year.

Going Forward

Solutions will continue to work with the mango industry to sign up key exporters in its traceability program. It is also using this platform with other agribusinesses in Haiti, including for organic coffee and vetiver oil traceability, and with other implementing partners to help with farmer impact monitoring. It has also begun to work in other markets, including Uganda, to establish similar systems.
USAID/Malawi worked with Feed the Future Partnering for Innovation to address challenges such as underdeveloped markets and low agricultural productivity by accelerating private sector engagement; identifying and scaling up agricultural technologies for smallholder farmers; providing technical assistance to evaluate Mission and private sector partnership needs; identifying business models for private sector engagement; and reducing the time it takes to implement public-private partnerships.

Through September 2018, 39,266 farmers are using new technologies and services through partnerships in Malawi.
Background
In 2015, production of orange flesh sweet potato (OFSP) in Malawi was increasing but perceptions remained that it was only a subsistence crop. To build a market for this nutritious food, Universal, a leading food and beverage processor in Malawi, worked with Partnering for Innovation to commercially launch several new OFSP processed products in the Malawi market. The products were based on improved varieties that Universal developed with the International Potato Center.

Universal worked to build a sustainable OFSP supply chain for its snack products by providing technical assistance, improved vines, and a formal market to over 8,600 sweet potato farmers. Farmers benefitted from higher prices as well as a guaranteed market and Universal developed a domestic raw material supply chain. Both rural and urban consumers benefitted from increased access to Vitamin A-rich OFSP foods, addressing a major nutritional deficit in Malawi.

FY 2018 Results
Universal sold $44,156 worth of value-added OFSP products, contributing to a partnership total of $77,500 in new processed product sales. Universal addressed several challenges in introducing and ramping up OFSP processing, including low production of raw materials at the farm level, and trialing different varieties to determine the most appropriate for a particular product.

For example, the best variety for making bakery dough was different than the variety for crisps. In addition, consumer demand for processed products in Malawi has been flat, compared to consumption of the unprocessed sweet potato at the farm level. This is also reflected in recent research conducted by Dalberg that indicated negative growth in the Malawian economy, coupled with low consumer spending, resulted in lower demand for processed products. These challenges led to Universal missing its final milestone of $100,000 in sales of at least four new processed OFSP products.

Going Forward
Universal faces challenges in both the supply of OFSP and demand for OFSP processed products. With the completion of Partnering for Innovation’s investment, and based on its results, Universal’s management will need to prioritize which processed products it will continue to produce and promote in Malawi and the region.
USAID/Mozambique and Partnering for Innovation worked to accelerate engagement with the private sector, identify and scale-up agricultural inputs, and identify business models and approaches for private sector engagement. We also aimed to reduce partnership development time in order to more efficiently work with the private sector. These goals were developed to find commercial solutions to the common challenges facing Mozambican farmers such as undeveloped agro-inputs distribution and offtaking systems.

Overall, the partnerships in Mozambique met or exceeded sales targets. USAID/Mozambique is continuing its investments into Partnering for Innovation and developing a new set of commercial partnerships during the extension period.

Through September 2018, 152,733 farmers used new technologies on 135,662 hectares through partnerships in Mozambique.
EMCL is one of the largest buyers of pigeon pea, sesame, soybeans, groundnuts, and common beans in Mozambique. With Partnering for Innovation’s support, EMCL provided farmers with new market and storage options, inputs including locally produced improved seed, and small-scale equipment rental through a network of storage and retail hubs. Each hub consisted of a retailer, farm equipment services, and a storage facility. The hubs were established to allow smallholder farmers to either sell their grain at the spot market price to EMCL or store it free of charge for 90 days and speculate on market prices.

Notably, an important activity within this partnership was for EMCL to train and staff the hubs with women entrepreneurs. This compelling idea stood out to the Mozambique Mission and to Partnering for Innovation in terms of gender and workforce development contributions.

FY 2018 Results

Over the course of this partnership, EMCL reached 60,248 farmers (compared to a target of 22,900) through its commodity buying, input sales, mechanization, and storage services. The commodity buying business represented more than 80 percent of farmers impacted through these interventions, with farmers having earned more than $66 million in sales of commodities to EMCL, about $300/year per farmer over the three-year partnership. There was little evidence of smallholder farmers taking advantage of the storage/speculation option.

Other service activities, including the retail shops and mechanization services, did not meet the targets established under the partnership or showcase future viability within EMCL. Therefore, the final milestones were not met despite several modifications and attempts by Partnering for Innovation and EMCL to find improved strategies.

Specifically, EMCL needed to reorganize the retail hubs to become profitable. It needed to identify logistics companies to stock the EMCL hubs with fast moving consumer goods and link them with seed companies. Unfortunately, it was too late and many of the women entrepreneurs closed their businesses, resulting in EMCL failing to meet its final milestone of 23 women entrepreneurs managing profitable retail outlets.

The investment in crop offtaking and aggregation, on the other hand, was a major success given the sheer number of smallholders impacted through the large market EMCL opened to them.

Going Forward

EMCL will continue its successful offtaking and aggregation services and continue to find ways to improve smallholder farmer yields to grow its business. The opportunity to engage farmers closer to where they grow and market food is still of interest to EMCL and it will need to reconsider how to build and operate retail businesses in Mozambique. The hubs will need to link directly to its bottom line by exploring potential franchising models. It remains to be seen how EMCL will proceed with the hubs, which are well positioned assets to reaching last mile customers.
Opportunity International

12,205 smallholder farmers gained access to savings accounts, loans, and training in good agricultural practices and financial literacy

Mozambique

November 2014 – March 2018 (completed)

Program Funding $1,754,072
Partner Leverage $1,959,642

$3,713,714

Background

Through this partnership, Opportunity International and a private local financial services provider, Banco Oportunidade de Moçambique (BOM), sought to provide services to smallholder farmers that reduce their reliance on unregulated moneylenders lending at exorbitant interest rates. Opportunity International provided sesame and soybean farmers with financial and banking services including savings accounts, loans, and mobile money services. It also provided farmers with training on good agricultural practices and financial literacy, which led to improved savings generation and loan repayment rates. Opportunity International specifically targeted women farmers for training and financial services.

FY 2018 Results

BOM disbursed 29 loans (1,320 cumulative) to farmers with an average loan size of $950. Additionally, 4,791 farmers opened a savings account (cumulative 12,205) during the final months of the partnership. However, BOM’s acquisition in 2017 by MyBucks, a financial technology company that focuses on emerging markets, resulted in personnel and operational changes that affected the value and number of loans being disbursed. This was due primarily to new rules by MyBucks for larger collateral requirements for farmers to offset risk, but which resulted in fewer farmers qualifying for the loans.

The Central Bank also introduced new policies for group agricultural lending requiring that each farmer group formally register with the Central Bank. In rural Mozambique, registration logistics and costs are challenging for farmer groups. The new directive ended BOM’s efforts to organize new farmer groups and thus brought group lending to a halt. As a result, BOM did not meet its last loan disbursement milestone and the partnership was concluded early in March 2018.

Going Forward

BOM is proactively responding to the Central Bank’s changed policies by engaging larger farmers groups already registered. It is also engaging more small- and medium-size agricultural businesses, which are less costly and more profitable to manage than smallholder farmers. BOM is also focusing on value chains with more predictable market prices and stable buyers. While BOM remains committed to providing services for the smallholder market, it is going to need to keep adapting its mobile money strategy and make its smallholder farmer outreach more efficient and cost-effective.

Opportunity International is expanding smallholder farmers’ access to loans and banking services.
Background

Through this partnership, TECAP expanded its Maputo-based sales and service center, which it calls a “farmer home,” to three major producing regions in Mozambique: Tete, Nampula, and Manica provinces. These new farmer homes, based in the main city in each province, sold agricultural inputs and mechanization services directly to individual farmers and through affiliated small retailers. TECAP’s farmer hubs contributed to solving the country’s limited commercial input distribution markets, which leave most farmers without access to improved seeds, fertilizers, pest management products, or equipment.

Additionally, TECAP improved its last mile distribution of products and services to smaller towns and villages. It established a network of 50 agrodealer shops and 20 franchisees. It also trained 250 agriculture development agents, who develop relationships with customers and train them in good agricultural practices while promoting TECAP products.

FY 2018 Results

The TECAP partnership reached almost 46,000 smallholder farmers with improved inputs and mechanization services, generating $3 million in sales. This represents a doubling of sales for TECAP over two years and a completely new customer base in major agriculture production areas of the country. TECAP faced difficulties in recruiting entrepreneurs with sufficient capital to purchase a franchise because the requirements were too capital intensive, and after TECAP tried lowering investment requirements, it pivoted from a franchising model toward distributing products through a network of affiliated agrodealers to expand more rapidly in these new markets. A concurrent marketing and promotional campaign, dubbed “Buy in Mozambique,” targeted agrodealers and their customers to increase sales.

In the last half of FY2018, TECAP invested in improved data collection and customer management systems to track sales data to more effectively target its customers with the right products. One internal challenge TECAP faced related to these system upgrades was that it is difficult to get data from agrodealers selling the TECAP products. Most agrodealers are small shop owners who lack product sales tracking capabilities. Though TECAP was able to use the customer relationship management (CRM) system to track direct sales and potential sales leads, it is still developing ways to extend this system down to the agrodealers so that it can better manage inventory demand. One approach it tested was a nationwide contest for agrodealers to receive awards for correctly filling out ordering forms that include customer names, locations, mobile numbers, and crops.

Going Forward

TECAP remains committed to the Mozambique agriculture market and will develop partnerships with logistics and other value-added companies to improve services and lower costs. In addition to the expansion of the retail business model, it is also investing in poultry processing; commodity buying for value-added processing; and real estate development. Investment in these additional business lines will help TECAP improve its commercial viability through vertical integration. As farmers become more productive and TECAP’s business grows, more competitors may begin to enter the Mozambican agriculture market to offer more choice to the smallholder farmer. This will create healthy competition for companies like TECAP to produce more and better products and services for smallholder farmers.
Txopela Investments

**Background**

Partnering for Innovation, Txopela Investments, and the cooperative COPAZA invested in the creation of a company called Sociedade de Beneficiamento de Sementes (SBS) as a sustainable supplier of certified seed and other agricultural inputs in central Mozambique. NGO TechnoServe provided technical assistance in management services and impact monitoring that enabled SBS to establish a facility for cleaning, grading, storing, and packaging improved legume seed for sale to local smallholder farmers. SBS also distributed other agricultural inputs and provided training, mechanization, and other services to smallholder farmers.

**FY 2018 Results**

With its seed cleaning, processing, and packaging facility fully operational, SBS met its target of providing **seeds, inputs, technical assistance, and offtaking services to 3,600 smallholder farmers**. SBS purchased, cleaned, packaged, and sold 200 tons of improved soybean, pigeon pea, sesame, and common bean seed produced by COPAZA members. From its members and other area smallholder farmers it also **purchased 720 tons of commodity, mainly legumes**. Because the SBS seed processing facility was underutilized by area farmers as compared to what was originally projected, SBS and TechnoServe worked to increase demand for seed distribution and sales, identified other potential distributors for its seeds, and incorporated poultry feed production to SBS’ business model.

**Going Forward**

SBS recently received financing from the World Bank to install a feed mill plant, and from the African Bank of Development to finance startup kits for the smallholder farmers to produce chickens, eggs, and build a slaughterhouse. This additional investment will allow SBS to diversify into other value added activities and increase both the sales of improved seeds and purchase of commodities for value-added processing. It will be important for SBS to capitalize on these early investments to move into profitability. It can potentially serve as an example for how businesses can be engaged to fill gaps in rural agricultural markets.

Txopela is expanding the supply of improved seed for smallholder farmers in Mozambique.
Working with the private sector through Feed the Future is central to USAID’s agriculture development strategy in Nigeria, and Feed the Future Partnering for Innovation helped address bottlenecks to inclusive growth by supporting private sector partnerships in agriculture. Such partnerships support Nigerian smallholder farmers, who make up more than 70 percent of the total farming population, to overcome face labor constraints that belie the country’s strong agriculture sector.

For example, Babban Gona hugely exceeded its targets and sold products and services to thousands of smallholder farmers who it also sources from. Hello Tractor and Chi Farms met several challenges and despite them met half of their sales goals.

Through September 2018, 36,027 farmers are using improved technologies and practices through partnerships in Nigeria.
Babban Gona

25,037 smallholder farmers formed cooperatives, receiving credit, inputs, technical assistance, storage, and market access, resulting in new net income of more than $2 million.

Nigeria

May 2016 – July 2018 (completed)

$4,759,546

Program Funding $1,021,551
Partner Leverage $3,737,995

Background

Smallholder farmers’ low economies of scale inhibit access to the credit, reliable suppliers of agricultural inputs, access to appropriate information on best practices to optimize yields, and the ability to store and market their produce to attain a higher price as the product value appreciates postharvest. In Kano and Kanduna states, Babban Gona addressed these challenges by forming smallholder farmer cooperatives called trust groups, which enabled maize, rice, and soybean farmers to attain greater economies of scale for purchasing inputs, receiving credit and technical assistance, and storing and selling their crops. Babban Gona provided these trust group members with services such as management training, loans, and input purchasing, resulting in increased productivity and profitability that improved household food security and livelihoods.

FY 2018 Results

Through continued expansion throughout Kano and Kaduna states in 2018, Babban Gona was able to incorporate almost 17,000 new farmers into trust groups, totaling 25,037 member farmers in 4,200 trust groups over the two-year partnership. Using a cadre of 200 extension agents that were also hired and trained under this partnership, farmers received technical training, input distribution on credit, field mapping, soil analysis, and harvest assistance. As a result, Babban Gona reports that farmers have doubled the yields and tripled their net income compared to the national average of $300/hectare in Nigeria.

Babban Gona has also launched a last mile retail distribution system for trust groups. These retailers allow farmers and community members in remote areas to more easily access agricultural inputs and other fast moving consumer goods such as salt, sugar, coffee, cooking oil, and powdered milk. Babban Gona purchases items in bulk and distributes them to its network of independent retail shops run by local entrepreneurs, many of whom are women. In FY2018, Babban Gona established 900 of these and plans to have more than 1,500 by the end of 2018, with most run by women. Babban Gona sees these shops as an important strategy to expand its distribution network by diversifying revenue during the off-season.

Going Forward

The partnership with Babban Gona successfully ended in July 2018, and the company has no plans of slowing its growth. Its plan is to continue to expand in Kano and Kaduna and will start up in neighboring states with a goal of reaching one million farmers by 2025. It has successfully raised $4 million in debt financing from commercial investors and is negotiating with two other investors for additional financing, a clear indication that its business model has demonstrated its investment potential.

Babban Gona will continue to support farmer cooperatives in Nigeria with management services, input purchasing, and loans.
Chi Farms

Background
Recognizing the need to increase Nigeria’s domestic fish production to meet growing demand, Chi Farms expanded its capacity to produce high-quality inputs for smallholder fish farmers. Through the partnership, smallholder farmers in Kano and Sagamu states accessed high-quality catfish fingerlings from Chi Farm’s hatcheries, as well as aquaculture management training and financial management tools to provide the knowledge necessary to build successful aquaculture businesses. With Partnering for Innovation’s support, Chi Farms expanded its current feed production to include high-quality aqua feed, which will not only benefit fish farmers, but also soybean and maize farmers supplying raw material for the feed.

FY 2018 Results
Chi Farms succeeded in establishing itself in northern Nigeria, while continuing to scale its operations in the south-western part of the country. The company now has two full-time client focus teams of aquaculture experts in both regions. In FY2018 these teams reached 770 new fish farmers and provided technical assistance in pond management, stocking and feeding practices, and disease prevention. In April 2018, Chi Farms opened its Kano-based hatchery, which provides a reliable supply of quality juveniles to Chi Farm’s northern fish farmers.

Throughout the partnership, Chi Farms experienced challenges and delays, but the most notable was with arranging fish farmer financing. Commercial banks require income and asset information that most farmers lack, and also require them to be registered as businesses in order to qualify for loans. Collecting the needed documentation, many for the first time, required more time than was programmed in Chi’s initial proposal. Even though Chi Farms explored a number of financing options, including supplier credit direct from Chi Farms, the challenges with financing led to a delay in sales, resulting in Chi Farms missing its final sales target.

Overall, Chi Farms impacted more than 1,300 smallholder fish farmers, providing capacity building, quality inputs, and facilitating access to finance. Additionally, to ensure a sufficient supply of quality inputs for its fish feed production, Chi Farms provided technical assistance in production and harvest practices to 6,611 maize and soybean farmers.

Going Forward
Chi Farms met most of its partnership objectives in expanding the sale of catfish fingerlings and feed to smallholder farmers. The company plans to continue to expand its reach into northern Nigeria using its new hatchery in Kano as a base of operations. Chi Farms is also exploring fish processing to supply area supermarkets. Processing will allow the company to provide its smallholder customers with a new market outlet and diversify its business to meet the demand of Nigeria’s growing urban-based customers.
Hello Tractor

4,300 smallholder farmers accessed tractor services; 120 youth entrepreneurs trained in owning, maintaining, utilizing, and promoting Smart Tractor services, and 15 youth technicians were trained to repair Smart Tractors.

Nigeria

June 2016 – July 2018
(completed)

$1,982,334

Program Funding $989,470
Partner Leverage $992,864

Background

In Nigeria less than 3 percent of farmland is mechanically plowed, so there is a massive opportunity for offering affordable and reliable mechanization services to smallholders. Hello Tractor initially proposed to commercialize a Smart Tractor model in Oyo, Federal Capital Territory, and Kano states. This model, based on a pilot project, called for Hello Tractor to partner with local commercial banks to provide financing for entrepreneurs, mainly youth agripreneurs, to purchase two-wheeled tractors fitted with software that would link them to smallholder farmers via SMS, providing access to on-call affordable tractor services to help increase their productivity while creating new business opportunities for the agripreneurs as Smart Tractor service providers. However, the commercial financing model did not work and a major redesign of the partnership took place in 2017.

The updated approach focused on supporting Hello Tractor’s updated business-to-business sales model to tractor owner associations and larger-scale tractor enterprises. It sells hardware and subscription services to established tractor businesses, which monitors the daily use of its tractor fleets by tractor operators. Hello Tractor shifted to training the agripreneurs as booking agents rather than as smart tractor owners. The agripreneurs use the Hello Tractor’s scheduling software to earn a commission for each booking they make.

FY 2018 Results

Shifts in its business model required Hello Tractor to retrofit its technology and identify a new customer base. A redesign during the 2017 season resulted in Hello Tractor missing its target of 12,250 farmers accessing plowing services. Hello Tractor has proven resourceful in moving its technology into the Nigerian agricultural market, and testing its business model to facilitate mechanization for smallholder farmers. The booking agents are village-based and therefore critical to smallholder marketing the service because they know the farmers that need access to mechanization and link them with tractor owners and operators.

Throughout FY2018, Hello Tractor made headway by building its booking agent network of 120 youth receiving training. These booking agents are identifying smallholder farmer customers and scheduling plowing services. However, despite the training and technology, many of the booking agents are transmitting confirmations through phone calls rather than through the Hello Tractor smartphone system. Hello Tractor is unable to collect crucial smallholder customer information such as type of services provided and service location. As a result, data on areas plowed, crops produced, and other farmer impact information is unavailable, resulting in underreporting of actual farmer impact.

The partnership formally ended in July 2018, with 300 tractors retrofitted with the Smart Tractor device and 3,624 smallholders having received tractor services. Tractor owners reported improvement in revenues and lower costs of operations from being able to monitor the day-to-day movements of their tractors. Hello Tractor continues to train and support its booking agents with the objective of having all of them use the smartphone platform to input booking information that can be used to develop a more robust customer database.

Going Forward

For Hello Tractor to continue to scale and be successful in Nigeria, it is improving the booking agent interface so tractor owners can monitor in real-time the services provided by their equipment including land area, crops, and other information in a way that maps smallholder customer outreach, engagement, and impact. Hello Tractor is working with its software provider to improve these systems and to train its booking agent network.
Niji Foods

Established three new cassava peel mash processing centers.
Trained 753 women and sourced cassava peel for animal feed from centers employing 30 women farmers.

Background

Nigeria is the world’s leading producer of cassava. However, peels, a by-product of processing, are left unused. Through this partnership, Niji Foods, with support from the International Livestock Research Institute (ILRI), established cassava peel processing centers in Oyo State. These centers consolidated and processed cassava peels into mash, and then sold them to animal feed companies as a low-cost substitute for maize. Niji Foods established small processing centers and trained 18 factory employees, six administrative staff, and 750 women cassava peelers and farmers on plant operations and business management. A target of this project was for Niji Foods to source cassava peels from these women-run centers, providing them with an additional source of income. Niji’s other key target was to process at least 6,480 tons of cassava peel and sell 2,945 tons of cassava peel mash to poultry and fish feed companies in Oyo State.

FY 2018 Results

In FY18 Niji Foods began to more consistently process cassava peel from its three production sites and market to its 10 main poultry and fish feed processing customers in Oyo State. These customers tested samples and increased their volumes, a positive sign. At the close of the partnership in April 2018, Partnering for Innovation conducted a survey of these buyers that uniformly reported satisfaction with the cassava mash product. As a result of Partnering for Innovation’s investment and technical support, Niji Foods processed and sold 2,949 tons of cassava peel mash. While the sales of the peel mash met projections, the sourcing of the raw cassava peel did not. Niji Foods had agreed to source from 750 women members of peeling processing centers, but the program was only able to verify that it had sourced from centers employing 30 women, and therefore Niji Foods did not receive payment for its final milestone.

The partnership faced a number of challenges throughout its implementation. For example, Niji Foods had difficulties organizing and managing cassava peel procurement from its network of women’s groups, which was a key component of its business proposition. Niji Foods also lacked the capacity to establish and maintain records of raw material supply and payments for those supplies. Partnering for Innovation provided capacity building services to help Niji Foods improve its internal systems, however their management uptake of these services was limited. Additionally, its relationship with technical partner ILRI was strained, and one result was that the company did not implement all of the recommendations needed to address the quality of cassava peel mash.

Going Forward

Despite the challenges encountered during this partnership, Niji Foods continues to scale their cassava peel mash product line and try to source from the additional cassava peeler groups – opening up markets and income opportunities while reusing peels that would otherwise go to waste.

Niji Foods is processing cassava peels into feed mash, turning this previously wasted product into an income source.
Zambia experienced strong economic growth in recent years and improvements in infrastructure and policy made it a promising place to do business. Unfortunately, more progress is needed in rural areas where poverty rates and malnutrition are highest. To help farmers in Zambia meet their potential, USAID/Zambia worked with Feed the Future Partnering for Innovation to expand market opportunities, increase access to improved agricultural inputs and mechanization, and develop better quality technical advisory services for smallholder farmers.

Through September 2018, 8,818 smallholders were trained to use new agricultural innovations through partnerships in Zambia.
Amatheon Agri

**Background**

Amatheon Agri, a Zambian agriculture company, has a large-scale farm and supplements its production by sourcing commodities from smallholder outgrowers in the vicinity of its farm. In an effort to expand its outgrower scheme to 6,000 new smallholder farmers, Partnering for Innovation invested in Amatheon to provide these smallholder outgrowers with training in conservation farming and farm management, improved access to inputs and markets, and linkages to financial services. The partnership also aimed to establish 20 new rural aggregation and input depots, and one new seed bank.

The partnership with Amatheon was originally scheduled to end in July 2018, but was extended to December 31, 2018 to align the milestones with the Zambian agricultural calendar and give them additional time to achieve the final milestone.

**FY 2018 Results**

Amatheon continued to expand its outgrower model in Chibombo District, completing 20 rural depots for collection and establishing demonstration plots at each depot. The demonstration plots are managed by 60 lead farmers who trained more than 3,000 smallholder farmer outgrowers in conservation farming practices and farm management. To ensure these outgrowers receive quality inputs, Amatheon established a seed bank. The seed bank entitles each member to improved seed, but they must return 1.2 kilograms of seed at the end of the season for each kilogram they borrow at planting time. This past season Amatheon provided seed loans to 439 of its trained outgrowers. By offering seed loans for groundnut, cowpea, soybean, and sunflower, Amatheon is encouraging farmers to diversify from maize into other high-value crops.

In early 2018 there was a month-long drought corresponding to the beginning of the growing season. As a result, the national yield for maize and legumes declined by 30 to 40 percent, creating a shortage and high farm gate prices. While this was good news for farmers who were able to produce surplus, it created a challenging market dynamic for Amatheon. Millers and traders that needed supply to meet customer orders competed with Amatheon for product at the farm gate, and most outgrowers chose to sell directly because Amatheon was not able to match the prices offered and as a result, was only able to procure 300 tons of the 2,500 tons of grain required to meet its final milestone.

**Going Forward**

In addition to meeting the grain procurement target, the final milestone also was amended to require Amatheon to train an additional 3,000 smallholder farmers and sell at least 1,000 hermetic storage bags to outgrowers so that they would have better on-farm storage capacity.
Background
One agricultural challenge facing Zambian smallholder farmers is a lack of high-quality early generation and certified seed in appropriate quantities sold in rural locations easier for farmers to access. Good Nature is addressing this issue by expanding its seed outgrower network with support from Partnering for Innovation. Foundation seed, needed to produce certified seed, is difficult to access for seed producers, so Good Nature is developing its own seed farm that will allow it to supply high-quality foundation seed in a timely manner to its seed outgrowers. Under this agreement it is also expanding its private extension agent network, providing soil analysis, and creating an organic fertilizer blend specifically formulated for use by smallholder legume seed farmers.

FY 2018 Results
In FY18, Good Nature completed its target of training 200 private extension agents (PEAs), and each is responsible for the training and management of 25 seed outgrowers. In addition to agronomic advice, PEAs provide training in basic farm management to its farmer groups during the season. In the past year these PEAs trained 5,200 smallholder farmers who became members of Good Nature’s outgrower network. Because of drought during the early part of the growing season, national yields of all crops were at least 30 percent below average, causing farm gate prices to increase. As a result of the low production volume, traders and speculators were actively bidding up prices for both commodities and seeds, resulting in a number of Good Nature’s outgrowers to side-sell their seed production to other buyers. Good Nature did not meet its 2018 targets of producing 200 tons of foundation seed nor of procuring 4,000 tons of legume seed from smallholder outgrowers.

Because of the privatization of the seed industry and the growth of private seed distributors, Good Nature has had to devote time and resources to establish retail distribution relationships to build its network of seed dealers. To increase its sales and marketing efforts, the company opened an office location in Lusaka to be more centrally located to major distributors. In 2018, Good Nature built relationships with distributors to more than 200 retail outlets throughout Zambia that are now stocking Good Nature seed.

Going Forward
Good Nature’s final milestones were submitted in mid-August 2018 and Good Nature is exploring a number of ways to continue to scale the business. This includes creating strategic partnerships with programs that are working more directly with large numbers of smallholder farmers. In the long-term, Good Nature plans to expand its operations regionally into other southern African countries.
Background

To meet the rising demand in Zambia for products like tomato and cabbage, MRI-Syngenta is using funding from Partnering for Innovation to build a sustainable seedling production and distribution business for the horticulture sector. The partnership will continue during the program extension, training youth operators to establish seedling production centers to demonstrate and market vegetable seedlings to farmers in southern and eastern areas of the country. By promoting the hybrid seedling market, MRI-Syngenta is also addressing a lack of quality seed stock and increasing the awareness and appreciation of farmers of the value of hybrid seeds. By creating and supporting 20 pilot seedling business run by young entrepreneurs, it is improving the economic prospects for youth in agriculture.

FY18 Results

MRI-Syngenta continued to support the piloting of 20 youth-run seedling businesses, also known as young plant raisers (YPRs). MRI-Syngenta provided YPRs with equipment and supplies on credit, and ongoing technical assistance to establish seedling production businesses in their communities. The YPRs are currently marketing their seedlings to farmers in their communities using marketing materials developed by MRI-Syngenta. As part of the promotional campaigns, YPRs have already conducted demonstration days for more than 8,400 farmers, and 1,649 have purchased seedlings from the YPRs.

MRI-Syngenta experienced several delays in receiving equipment from its headquarters that was needed for the YPR seedling production. The YPRs also contended with disease issues in their first cycles of seedling production. Because of these startup issues, Partnering for Innovation and MRI-Syngenta negotiated a four month extension to the partnership that will conclude December 31, 2018. This will allow the YPRs to take advantage of the production season that gets underway in the fourth quarter of the year. YPRs are targeted to sell $500,000 of seedlings to at least 6,000 farmers by the end of the partnership.

Going Forward

During the coming months YPRs will train and market seedling products to an additional 3,600 farmers and also must verify the seedling sales targets. MRI-Syngenta will also develop a strategic plan for the next five years as part of its final milestone submission.
TechnoServe with Community Markets for Conservation

**Background**

Through this partnership, Community Markets for Conservation (COMACO) and TechnoServe increased the production capacity of farmer cooperatives that supply raw agricultural commodities such as honey and groundnuts for COMACO’s “It’s Wild” brand, which is sold regionally. Through its cooperative structure, COMACO provided market opportunities for its farmer suppliers. In order to expand its capacity to access product as well as to improve the livelihoods of its cooperative members, COMACO worked with TechnoServe to develop a training program that improves business management, marketing, and good agricultural practices to COMACO.

**FY18 Results**

The partnership with COMACO and TechnoServe concluded in July 2018 with COMACO training nearly 16,000 smallholder farmers in eastern Zambia in good agricultural practices. Of those, 1,530 smallholders sold 515 tons of maize, soybean, and groundnut to COMACO for processing. Other training included 500 beekeepers, 1,200 women producing vegetables, and 600 farmers producing poultry, with all selling product into the COMACO system.

In addition to providing farmer training and commodity procurement, COMACO improved its food handling and processing practices, receiving training in good manufacturing practices and HAACP programs, which are industry standards for food handling and processing, within its facility. By attaining and maintaining these certifications, COMACO can access regional and international markets for its products. In addition to improving market access, the certifications help COMACO improve production processes as it requires standard management systems and cycles that continually assess efficiencies, which has been helpful for reducing costs in the medium to long-term.

**Going Forward**

In its five year strategy COMACO plans to build on its success with the “It’s Wild” brand of processed foods to the growing number of supermarket chains as well as through food wholesalers that service the fast moving consumer goods markets in the region. Products include peanut butter, rice, processed soy milk, dried snacks, and beans. On the supply side of the equation, it is committed to growing a network of cooperatives and the capabilities of its farmers to increase their productivity and reduce costs so they are more reliable suppliers of raw materials for their food processing operations.

Honey is one of the products that smallholder farmers in Zambia produce for COMACO’s “It’s Wild” brand.
3. Acceleration Services

Partnering for Innovation provided acceleration services to 27 partners and subpartners. These included on-demand, customized support to individual partners as well as cross-cutting support services to multiple partners.

Customized Services

- **Agribusiness Planning in Haiti:** Solutions SA in Haiti received consulting advice on its five-year business plan, including how to pivot its activities to overcome the devastating effects of production interruptions on the mango industry.

- **Market Analysis in Zambia:** Stewards Globe participated in a customer-level survey to generate business insights about increasing outgrower productivity, customer loyalty, and more efficiently working with smallholder farmers. The company’s leadership learned strategies for gathering and using market intelligence.

- **Smallholder Farmer Engagement in Mozambique:** Partners TECAP and Txopela participated in customer surveys to inform product and marketing strategies. Banco Oportunidade de Moçambique (BOM) piloted new mobile money services for its bank clients in partnership with a local mobile network provider. BOM also finalized its long-term smallholder farmer engagement strategy for improving product uptake.

Cross-Cutting Partner Services

- **Agribusiness Financing in Malawi, Mozambique, Nigeria, and Zambia:** Nine partners worked with experts to assess commercial financing options for growing their businesses by evaluating the financial landscape against each partner’s plans for obtaining commercial investment. The process resulted in customized recommendations for each partner to become investor-ready, such as improving partners’ pitch materials, business plans, and growth projections. In some cases, support included matchmaking between partners and regional commercial and impact investors.

- **Market Systems Training in Mozambique:** Two market systems trainings provided 17 partners and commercial stakeholders, from across local and regional agriculture value chains, with a broader understanding of how to target the smallholder farmer market. Participants learned how to identify and manage market gaps, policy challenges, and roles and responsibilities of different market actors.

- **Biological Product Registration System in Central America:** Partnering for Innovation reviewed and documented the biological product registration process in four Central American countries. The study will enable Popoyán, Zamorano, and other biological companies in the region to more effectively navigate the complicated government product registration and approval process.

- **Feed the Future Accelerating Women Entrepreneurs (AWE) Prize:** The award was designed specifically for women-owned businesses in Africa, and through this competitive process two small businesses in Nigeria and Ghana were selected to receive acceleration services. Nature’s Bounty and Health Products Ltd., better known by its ReelFruit brand name in Nigeria, and Rockland Farms in Ghana.

A summary of the findings and recommendations for preparing companies for future investor readiness can be found here.
4. Knowledge Exchange & Communications

Partnering for Innovation captured and shared lessons learned about making agricultural technologies and services commercially available to smallholder farmers in partnership with private sector businesses.

• **Updated website and three videos:** All program knowledge for partners and stakeholders is housed in the [award-winning website](#). It features two animated videos that illustrate *why* and *how to* develop shared-value partnerships as well as a live action video featuring three partnerships.

• **Practitioner Guide:** This how-to guide was developed to document program’s best practices for engaging the private sector. It was co-developed across team members, reflecting partner input from exit interviews and was reviewed by USAID. It will be widely shared in November 2018. In addition, a [podcast series](#) supplements the practitioner guide to reach more auditory-inclined learners.

• **Business Strategy Guide:** This document reviews elements of successful business strategies for commercializing products and services in rural smallholder markets. It was based on the 50 program partnerships and is currently under USAID review.

• **Research to Commercialization Study:** Partnering for Innovation completed a study entitled *Designing Agriculture Research that Leads to Commercialization* to look at engagement strategies for researchers and donors to consider when funding agriculture research. This study is a follow-up to the one conducted in 2017 that explored [commercial scaling pathways](#) for publicly-funded research innovations.

• **Updated Market Assessment and Pre-award Survey Tools:** These tools, used to inform partnership development and due diligence, were updated to reflect program lessons. For example, the pre-award survey aggregates lessons learned for selecting partners to not only ensure USAID and Fintrac compliance but to also analyze for partner capacity.

• **Articles, Events, and Social Media:** The program continued to post articles to USAID’s [Agrilinks](#) and [Marketlinks](#) community sites, LinkedIn, and other channels as well as share updates and lessons through its monthly newsletter, partner newsletter, [Facebook](#), [LinkedIn](#), and [Twitter](#). Team members presented at six industry events about private sector engagement, building seeds systems, and good practices for commercializing technologies in smallholder farmer markets.
5. Challenges

Partnering for Innovation overcame challenges alongside its partners to find solutions to getting agriculture products and services to smallholder farmers.

In Agriculture, Timing is Always of the Essence

Partnering for Innovation’s three extensions affirmed the effectiveness and impact of the program’s private sector engagement approach for commercializing agriculture technologies. The extensions also presented challenges to balance the partnership timeframes for implementing activities within appropriate agriculture calendar cycles and USAID timelines. In order for any given partnership to effectively launch or expand into new markets, a minimum of two, and ideally three, production cycles are required to produce results. For example, to show adoption of a new seed variety, agribusinesses must first demonstrate that the improved seed will outperform varieties they already use, which can take multiple seasons. The timing of the extensions did not allow for developing new partnerships that could extend beyond two years.

Missed Milestones = Potential for Missed Farmer-level Impact

The program’s partnership agreements are designed to provide payment for meeting pre-negotiated milestones. This pay-for-performance approach incentivizes partners to meet desired business metrics that impact smallholder farmers. The milestones, which are also time bound, are designed to “stretch” the capabilities of partners toward more aggressive results that they may not undertake on their own. Sometimes stretch milestones end up being unattainable as originally negotiated, due to any number of factors.

In these cases partners simply don’t get paid and repurposing the funds into new investments becomes a challenge. For example, in Mozambique, Partnering for Innovation was able to redirect missed milestone funds into a new funding round, or use them to provide targeted technical assistance. In Nigeria and Guatemala, however, missed milestones were not able to be redeployed into acceleration activities or additional partnerships due to time and resource constraints, thus reducing overall farmer-level impact of these partnerships.

Acceleration Services That Support Local Market Systems Development

Many acceleration services provided to date by the program focused on broad partner challenges and contracted with a variety of US and internationally based experts to implement. While providing world-class advice and support, these providers are expensive and not always accessible to partners. A more accessible approach, and one which supports local business service development, is to identify and promote local service providers to address business capacity needs. Since this is a new and undeveloped service sector in many emerging markets, finding and engaging competent local business consulting capacity is challenging but the program is committed to this and under the next phase of awards, will incorporate milestones to incentivize partners to engage local companies to provide capacity development services.
6. Lessons Learned

Partnering for Innovation identified specific program lessons to improve program performance and contribute to improved practices across the development industry.

Technology is Important, but Business Leadership is Key

Regardless of how innovative a technology is, the quality of a company’s business structure and management team are critical to successful market entry or expansion. These two examples that illustrate this point. Store It Cold developed the CoolBot, a device that creates low-cost, cold storage units to extend the shelf-life of horticultural crops. Similarly, Hello Tractor created Smart Tractor technology to pair farmers in need of tractor services. Both are innovative, potentially game-changing products for smallholder farmers. With support from Partnering for Innovation, Store It Cold grew steadily to scale its product in Central America while Hello Tractor reduced its focus and footprint in Nigeria. Why?

Store It Cold’s corporate leadership, based in Colorado, was creative and transparent about the challenges of expanding into new countries. The leadership empowered its field staff to make key decisions to adapt, shifting market conditions, and proactively responding to changes by negotiating new partnership activities and milestones. In contrast, Hello Tractor’s leadership was busy expanding into new markets, struggled to adjust a sales strategy to Nigerian market realities, and fell behind in meeting key smallholder farmer impact milestones as a result.

Think Like a CEO, Not an NGO

Not only must a partner have a dynamic management team and clear strategy for growth, they must also have a financial incentive beyond grant money to achieve partnership goals related to smallholder farmers. Their social impact goals must contribute to the core of their business as an incentive to continue them. When they are not, the social impact goals quickly become unsustainable. For example, Export Marketing Company Limited (EMCL), a multi-national input provider and commodity aggregator, partnered to sell inputs in retail hubs closer to where farmers live and work. EMCL’s plan was for each hub to be managed independently by women entrepreneurs and not contribute to its bottom line, removing EMCL’s financial stake in the success of the retail hubs. Because the success of these businesses was not connected to EMCL’s financial performance, the majority of small shops failed to generate sales and were closed.

Likewise, the partnership with Mercy Corps required it to train and connect young farmers with new market opportunities to receive premium prices for fruits and vegetables. As an NGO, Mercy Corps did not have a dedicated market nor did it have the private sector relationships to ensure adequate market outlets. Rather than rethink its strategy, Mercy Corps simply pushed through the original activities to meet the grant milestones for payment. These activities were unsustainable and marketing opportunities did not support the young farmers’ ongoing investments in improved production. Mercy Corps’ work is unlikely to carry on without further grant support.
6. Lessons Learned, continued

If It’s Broke, Fix It or Fail Fast

After months of negotiations and startup staff are vested in the success of each partnership and therefore prioritize working with them to find new ways around obstacles that invariably arise during implementation. Sometimes partners showed early signs that their business concept could not be executed and their sales milestones quickly became unattainable. In these cases, it was necessary to reorient activities so the company did not invest its resources in unachievable milestones, as this would be counterproductive to program goals and an irresponsible stewardship of taxpayer money. For example, MEA Fertilizers, a Kenyan company that developed and distributed the rhizobial inoculant BIOFIX, lost their in-house champion for rolling-out the BIOFIX product within the company. The company assigned a new staff member to manage partnership activities, but because BIOFIX represented a small portion of the overall business for MEA and the new staff was not fully committed to the partnership, milestones were missed. Through its monthly management calls Partnering for Innovation continued to work with the new manager to address production and sales challenges which by the end of the partnership MEA failed to achieve. A learning for the program is to pay close attention to changes in personnel to ensure that lead staff have the authority and resources to manage for results. In cases where key personnel changes, it is important to check corporate commitment and if that is lacking then quickly pivot to cancel partnerships rather than continue to devote resources that ultimately do not attain desired results.

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With the extension of Partnering for Innovation, lessons such as these and others were incorporated into the design of processes and tools for phase two of the program. For example, the due diligence and negotiation guidance and documentation templates were updated to offer more opportunities to evaluate the potential profitability of prospective partners’ proposed activities. They were also updated to include evaluation criteria for the capacity, commitment, and responsiveness of an applicant’s leadership team to ensure that a core team with decision-making authority and operational knowledge are involved in the day-to-day implementation of a partnership. New requirements were introduced to partner only with for-profit companies alone or as a consortium lead. Commercial companies have a financial stake in partnership activities for introducing and scaling products and services into these markets, and sales and profitability are powerful incentives that will help meet the shared value of benefitting smallholder farmers.
## Annex 1: Program Impact

### Required FTF Indicator 4.5.2-2
Number of hectares under improved technologies or management practices as a result of USG assistance

<table>
<thead>
<tr>
<th>Component #</th>
<th>Partnerships Reporting</th>
<th>FY 2013 Achieved</th>
<th>FY 2014 Achieved</th>
<th>FY 2015 Achieved</th>
<th>FY 2016 Achieved</th>
<th>FY 2017 Achieved</th>
<th>FY 2018 Target</th>
<th>FY 2018 Achieved</th>
<th>LOP Target</th>
<th>Achieved To Date</th>
</tr>
</thead>
<tbody>
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<td>1. Technology Commercialization</td>
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### Required FTF Indicator 4.5.2-5

**Number of farmers and others who have applied new technologies of management practices as a result of USG assistance**

<table>
<thead>
<tr>
<th>Component #</th>
<th>Partnerships Reporting</th>
<th>FY 2013 Achieved</th>
<th>FY 2014 Achieved</th>
<th>FY 2015 Achieved</th>
<th>FY 2016 Achieved</th>
<th>FY 2017 Achieved</th>
<th>FY 2018 Target</th>
<th>FY 2018 Achieved</th>
<th>LOP Target</th>
<th>Achieved To Date</th>
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<td>1. Technology Commercialization</td>
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<td>1,700</td>
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</table>
### Required FTF Indicator 4.5.2-38

Value of new private sector investment in the agriculture sector or food chain leveraged by FTF implementation (US$,000)

<table>
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<th>Component #</th>
<th>Partnerships Reporting</th>
<th>FY 2013 Achieved</th>
<th>FY 2014 Achieved</th>
<th>FY 2015 Achieved</th>
<th>FY 2016 Achieved</th>
<th>FY 2017 Achieved</th>
<th>FY 2018 Target</th>
<th>FY 2018 Achieved</th>
<th>LOP Target</th>
<th>Achieved To Date</th>
</tr>
</thead>
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## Required Custom Indicator

**Number of technologies or management practices made available for transfer as a result of USG assistance**

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## Required Custom Indicator

Value of total private sector funding leveraged in the agriculture sector or food chain as a result of FTF assistance (US$,000)

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# Annex II: Work Plan

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<td>Provide ongoing business and grant management assistance and capacity building support to partners</td>
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<td>12 monthly check-ins to date per partner, including milestone status reports, progress updates, and success stories</td>
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<td>1.1.2</td>
<td>Conduct monitoring visits</td>
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### Mission Partnerships

#### Ongoing Partnership Management

1. **Provide ongoing business and grant management assistance and capacity building support to partners**
   - Target: 12
   - Achieved: 12
   - Balance: 0
   - Description: 12 monthly check-ins to date per partner, including milestone status reports, progress updates, and success stories.

2. **Conduct monitoring visits**
   - Target: 9
   - Achieved: 6
   - Balance: 3
   - Description: 1 monitoring visit to Zambia (TNS, Amatheon, MRI/Syngenta, Good Nature) in Oct 2017; 1 monitoring visit to Nigeria (Babban Gona, Hello Tractor, Chi Farms, Niji) in Mar 2018; 1 monitoring visit to Benin (Tolaro) in April 2018; 1 monitoring visit to Guatemala (Servicios de Post-Cosecha, Popoyán) in April 2018, 1 monitoring visit to Honduras (Store it Cold) Oct 2017.

3. **PI-SMOG-MOZ-01-01 Opportunity International**
   - Target: 10,000
   - Achieved: 12,205
   - Balance: 0
   - Description: 12,205 farmers accessing loans, savings, and mobile money.

4. **PI-SMOG-MOZ-02-01 TECAP**
   - Target: 3
   - Achieved: 3
   - Balance: 0
   - Description: 3 farmer houses selling inputs and services to 45,713 farmers.

5. **PI-SMOG-MOZ-02-02 Txopela**
   - Target: 3,600
   - Achieved: 3,600
   - Balance: 0
   - Description: 3,600 farmers accessing improved seed varieties.

6. **PI-SMOG-MAL-01-02 Universal Industries**
   - Target: 8,500
   - Achieved: 8,653
   - Balance: 0
   - Description: 8,653 farmers producing 41MT of OFSP or receiving improved vines.

7. **PI-SMOG-GUA-01-01 Popoyan**
   - Target: 1,500
   - Achieved: 2,845
   - Balance: 0
   - Description: 2,845 farmers accessing beneficial biological pest control products.

8. **PI-SMOG-GUA-02-01 Mercy Corps**
   - Target: 1,020
   - Achieved: 1,060
   - Balance: 0
   - Description: 1,060 farmers participating in youth savings and loan groups.

9. **PI-SMOG-GUA-02-02 Post Cosecha**
   - Target: 1,470
   - Achieved: 2,218
   - Balance: 0
   - Description: 2,218 farmers purchasing improved potato seed.

10. **PI-SMOG-BEN-01-01 Tolaro**
    - Target: 3,200
    - Achieved: 3,230
    - Balance: 0
    - Description: 3,230 farmers selling cashew nuts to Tolaro at a price premium.

11. **PI-SMOG-NIGE-01-01 Babban Gona**
    - Target: 20,000
    - Achieved: 25,039
    - Balance: 0
    - Description: 25,039 farmers trained and with formal membership in trust groups.

12. **PI-SMOG-NIGE-01-02 Hello Tractor**
    - Target: 300
    - Achieved: 300
    - Balance: 0
    - Description: 300 smart devices sold improving mechanization for 3,624 farmers.

13. **PI-SMOG-NIGE-01-03 Chi Farms**
    - Target: 7,500
    - Achieved: 6,611
    - Balance: 889
    - Description: 6,611 farmers purchasing fish feed and fingerlings or selling maize and soy to the fish feed mill.

14. **PI-SMOG-NIGE-01-04 Niji Foods**
    - Target: 750
    - Achieved: 753
    - Balance: 0
    - Description: 753 women cassava farmers and peelers trained.

15. **PI-SMOG-ZAM-01-01 TechnoServe**
    - Target: 400
    - Achieved: 515
    - Balance: 0
    - Description: 515 MT improved seed purchased from at least 1,530 farmers.

16. **PI-SMOG-ZAM-01-02 Amatheon Agri**
    - Target: 2,500
    - Achieved: 300
    - Balance: 2,200
    - Description: 300 MT purchased from 439 farmers.

17. **PI-SMOG-ZAM-01-03 MRI Syngenta**
    - Target: 6,000
    - Achieved: 1,649
    - Balance: 4,351
    - Description: 1,649 farmers purchasing seedlings and vegetable varieties.

18. **PI-SMOG-ZAM-01-04 Good Nature**
    - Target: 600
    - Achieved: 361
    - Balance: 239
    - Description: 361 MT of improved seed sold, 5,200 outgrower farmers trained.

19. **PI-SMOG-LAC-01-01 Solutions SA**
    - Target: 300
    - Achieved: 302
    - Balance: 0
    - Description: 302 new farm business cells created, 8,800 farmer members trained.

20. **PI-SMOG-LAC-01-02 Farmforce**
    - Target: 6
    - Achieved: 6
    - Balance: 0
    - Description: 6 new software subscriptions impacting 1,714 farmers.

#### Ongoing Data Collection on Partnership Impact

1. **Submit semi-annual reports on progress against program indicators**
   - Target: 2
   - Achieved: 2
   - Balance: 0
   - Description: 1 annual report with progress against program indicators submitted to USAID on October 31, 2017; 1 semi-annual report with progress against program indicators submitted to USAID on March 31, 2018.

2. **Verify all data submitted for milestones with payments greater than $100K or final cumulative sales milestones**
   - Target: 21
   - Achieved: 21
   - Balance: 0
   - Description: 8 data verification surveys conducted (AgriJoven MS#12, MS#16; Amatheon MS#5; Babban Gona MS#12, MS#14; ETG MS#17; Hello Tractor MS#10; Niji MS#7; Popoyan MS#14, MS#15; Servicios de Post-Cosecha MS#15, MS#16; TNS/COMACO MS#7, MS#10; TECAP MS#12, MS#14, MS#15; Txopela MS#8, MS#11; MRI/Syngenta MS#8; Universal MS#13).
### Investment Models and Tools

#### 3.1 Customized Partner Acceleration Services

<table>
<thead>
<tr>
<th>NO.</th>
<th>DESCRIPTION</th>
<th>TARGET</th>
<th>ACHIEVED</th>
<th>BALANCE</th>
<th>DELIVERABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.1</td>
<td>Provide customized consultant expertise and support to targeted partners to address scale-up challenges</td>
<td>6</td>
<td>11</td>
<td>0</td>
<td>11 partners + 2 AWE recipients receiving customized acceleration services, including BOM (digital services strategy), Stewards Globe (customer survey and management; investor readiness), AISL (investor readiness) Popoyán, Zamorano (region biological control product registration), Hello Tractor (customer financial analysis), Chi Farms (customer financial analysis), Agro-Input Suppliers Ltd., RAB, TECAP, COMACO, ReelFruits (AWE), Rockland (AWE) (investor readiness)</td>
</tr>
</tbody>
</table>

### Cross-Partner Analysis, Resources, and Tools

<table>
<thead>
<tr>
<th>NO.</th>
<th>DESCRIPTION</th>
<th>TARGET</th>
<th>ACHIEVED</th>
<th>BALANCE</th>
<th>DELIVERABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2.1</td>
<td>Coordinate and facilitate targeted, technically themed regional AgLab events</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>2 market systems training events for implementing partners, input suppliers in Mozambique in Feb 2018</td>
</tr>
<tr>
<td>3.2.2</td>
<td>Develop new resources and tools based on cross-partner experiences for broad distribution to partners</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>Developing private sector engagement training tool</td>
</tr>
<tr>
<td>3.2.3</td>
<td>Develop a package of standard acceleration resources using existing consultant and farmer impact materials</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>Accelerator diagnostic survey</td>
</tr>
<tr>
<td>3.2.4</td>
<td>Update S2S Guide materials to incorporate additional case studies of closing partnerships</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>5 case studies for Tolaro, EthioChicken, Hello Tractor, Netafim, Store It Cold</td>
</tr>
</tbody>
</table>

### Knowledge Management

#### 4.1 Documenting Program Knowledge

<table>
<thead>
<tr>
<th>NO.</th>
<th>DESCRIPTION</th>
<th>TARGET</th>
<th>ACHIEVED</th>
<th>BALANCE</th>
<th>DELIVERABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1.1</td>
<td>Document key internal processes and critical program knowledge through regularly facilitated team debriefs</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1 comprehensive practitioner’s guide of key internal implementation information</td>
</tr>
<tr>
<td>4.1.2</td>
<td>Analyze current partner experience for business, management, or enabling environment lessons learned</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>Draft Business Guide submitted for review</td>
</tr>
<tr>
<td>4.1.3</td>
<td>Assess the program model for partnering with the private sector and confirm the program’s approach</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1 comprehensive study on the viability of the program’s approach to PPP; report expected in Q3</td>
</tr>
<tr>
<td>4.1.4</td>
<td>Conduct robust partner exit interviews to identify best practices and lessons learned</td>
<td>25</td>
<td>18</td>
<td>7</td>
<td>18 exit interviews conducted for AISL, BOM, RAB Processors, ICF/Danone, Bayer, EMCL, iDE, Moana, AATF, Agrico, Agrobonus, Metal, NCBA Clusa, Grameen Musoni, TECAP, TechnoServe, Universal, Tolaro</td>
</tr>
</tbody>
</table>

#### 4.2 Sharing Technical Lessons Learned

<table>
<thead>
<tr>
<th>NO.</th>
<th>DESCRIPTION</th>
<th>TARGET</th>
<th>ACHIEVED</th>
<th>BALANCE</th>
<th>DELIVERABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2.1</td>
<td>Develop a communications campaign to encourage donors and development practitioners to use the program’s approach to PPP</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1 comprehensive communications campaign resulting in new descriptive program language, communications products, and program website</td>
</tr>
<tr>
<td>4.2.2</td>
<td>Develop key tools for engaging donors and development practitioners as recommended by the communications campaign</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1 suite of communications tools, program videos, podcasts, webinars, etc. released via the program’s new website</td>
</tr>
<tr>
<td>4.2.3</td>
<td>Identify speaking opportunities at targeted external and USAID events to establish the program as a thought leader in PPP</td>
<td>4</td>
<td>6</td>
<td>0</td>
<td>4 external speaking and thought leadership opportunities (SOCAP in October 2017, M4P in November 2017, ANDE/DFID in February 2018); 1 external speaking opportunity expected in Q3</td>
</tr>
<tr>
<td>4.2.4</td>
<td>Host semi-annual brown bag events with USAID/MP to share lessons learned and coordinate with other USAID programs</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0 brown bag events hosted; deliverable canceled by AOR</td>
</tr>
<tr>
<td>4.2.5</td>
<td>Host quarterly tech talks on lessons from commercializing ag technology and developing mission partnerships</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>2 tech talks hosted and shared through the AgTechXChange in partnership with Agrilinks and ANDE; 2 tech talks expected for Q3 &amp; Q4</td>
</tr>
<tr>
<td>4.2.6</td>
<td>Share key internal lessons learned on program implementation through AgCluster and AgTechXChange</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>ongoing documentation on Agrilinks, etc.</td>
</tr>
<tr>
<td>NO.</td>
<td>DESCRIPTION</td>
<td>TARGET</td>
<td>ACHIEVED</td>
<td>BALANCE</td>
<td>DELIVERABLE</td>
</tr>
<tr>
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</tr>
<tr>
<td>4.3</td>
<td>Engaging AgTechXChange Community</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3.1</td>
<td>Curate Learn! page with bi-weekly commercialization blogs, guest authors, and new resource listings</td>
<td>24</td>
<td>24</td>
<td>0</td>
<td>12 blogs by staff, partners, guests on sector topics, incl. gender; 12 blogs expected in Q3 &amp; Q4</td>
</tr>
<tr>
<td>4.3.2</td>
<td>Curate Connect! page with online chats discussing success stories and lessons learned in ag tech commercialization</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2 online chats on partner success stories and lessons learned</td>
</tr>
<tr>
<td>4.3.3</td>
<td>Curate Grow! page with new funding opportunities for ag technology commercialization</td>
<td>24</td>
<td>24</td>
<td>0</td>
<td>5 targeted external funding opportunities posted; 19 funding opportunities posted expected in Q3 &amp; Q4</td>
</tr>
<tr>
<td>4.3.4</td>
<td>Develop new approaches for facilitating knowledge transfer between private sector actors through ATX</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>0 active investor members on AgTechXChange; deliverable cancelled due to decommission of ATX</td>
</tr>
<tr>
<td>5</td>
<td>Program Impact and Reporting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1</td>
<td>Program Impact</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>5.1.1</td>
<td>Collect sales data and other business metrics to ensure partner progress against targets</td>
<td></td>
<td></td>
<td></td>
<td>ongoing submission of sales milestones from partners</td>
</tr>
<tr>
<td>5.1.2</td>
<td>Verify all data submitted for milestones with payments greater than $100K or final cumulative sales milestones</td>
<td>28</td>
<td>29</td>
<td>0</td>
<td>29 data verification surveys conducted (AATF MS#54, MS#56; MEA MS#7, MS#8; Stewards Globe MS#9; Store It Cold MS#15; Twiga MS#3, MS#4; AgriJoven MS#12, MS#14; Amatheon MS#5; Babban Gona MS#12, MS#14; ETG MS#17; Hello Tractor MS#10; Niji MS#7; Popayan MS#14, MS#15; Servicios de Post-Cosecha MS#15, MS#16; TNS/COMACO MS#7, MS#10; TECAP MS#12, MS#14, MS#15; Txopela MS#8, MS#11; MRI/Syngenta MS#8; Universal MS#13)</td>
</tr>
<tr>
<td>5.1.3</td>
<td>Conduct farmer-level impact surveys for select partners to confirm sales to farmers and impact on women</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>5 farmer-level impact survey conducted (Stewards Globe; MRI/Syngenta; Good Nature; TECAP; Txopela). Survey number reduced due to program extension, lower budget available</td>
</tr>
<tr>
<td>5.1.4</td>
<td>Conduct a systematic review and analysis of quantitative and qualitative data for deeper analysis of program impact</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1 comprehensive metadata analysis of program milestone and survey data</td>
</tr>
<tr>
<td>5.2</td>
<td>Progress Reporting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.2.1</td>
<td>Submit semi-annual and annual reports on progress against program indicators</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1 annual report with progress against program indicators submitted to USAID on October 31, 2017; 1 semi-annual report with progress against program indicators submitted to USAID April 2018</td>
</tr>
<tr>
<td>5.2.2</td>
<td>Submit quarterly financial and accrual reports</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>4 quarterly financial accrual reports submitted to USAID on December 8, 2017, March 27, 2018, June 30, 2018, and September 30, 2018</td>
</tr>
</tbody>
</table>