COOPERATIVE DEVELOPMENT PROGRAM

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TCHO

Final Report 2010–2019

Peruvian farmers visit an organic coffee farm during a cooperative exchange in Marcala, Honduras

COVER PHOTO: Fermin Satalaya Tapullima, Florvith Tuanama Tuanama, and Milagros Satalaya Tuanama are members of the Sisa community of Oro Verde Cooperative in Peru

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EXECUTIVE SUMMARY

Cacao farmers from ACOPAGRO Cooperative celebrate the conclusion of the Cooperative Development Program in the community of Huingoyacu, Peru

Cooperatives are businesses that are user-owned and user-controlled, and often have a social focus in addition to a commercial one. Agricultural cooperatives provide an avenue for smallholders to share resources to process product, add value, and sell goods, but this is only the minimum of their potential. They have the ability to grow into dynamic, self-sustaining businesses that can create social cohesion and serve their membership through valuable services or benefits.

Equal Exchange is a worker-owned cooperative that has partnered with agricultural cooperatives around the world for thirty-two years to create a more equitable food system. Like their international partners, Equal Exchange shares challenges such as: meeting consumer demands for high-quality products, access to working capital, creating a sales strategy that evolves with markets and maintaining a sufficient inventory that allows them to continue to grow the business.

The Cooperative Development Program (CDP) is a global initiative that focuses on building capacity of cooperative businesses and cooperative systems for self-reliance, local ownership, and sustainability (USAID). "USAID's Cooperative Development Program (CDP) is designed to advance locally-owned development and enhance the Agency's ability to empower local actors to take the lead in identifying and addressing development challenges. To make development programs more locally-owned and sustainable, the CDP provides USAID Missions with resources, tools, and opportunities to better engage and empower local cooperatives and credit unions." (USAID 2019)

In 2010, Equal Exchange was awarded a five year, $3.5 million Cooperative Development Program grant, which was eventually extended to 2019 and reached over 19,000 cooperative members across four countries. Initially managed together with TCHO Chocolate, the CDP Program was seen as an opportunity to go beyond commercial relationships to interact with supply chain partners in new and innovative ways. The project worked in Ecuador, Dominican Republic and Peru to strengthen the cacao and coffee value chains through activities that improve productivity, quality and capitalization or organizational strengthening of cooperatives of small producers. The project set out to implement innovative technical assistance strategies that helped increase productivity levels, improve quality through post-harvest practices and sensory analysis and therefore add value to their products. All this was implemented together with activities to support the organizational and financial capacities of cooperatives. Project

UOPROCAE members Gabel Gaspar Wilson and Maria Teresa Carvajal Raaad with their cacao and their grandchildren in Ecuador

activities were led by dynamic project coordinators at each cooperative, who all contributed immensely to the success of this work.

From this project came the need to reflect on and evaluate the experience to identify impacts and lessons learned that can be useful for Equal Exchange, the cooperatives participating in the program and implementing partners. This final report looks at the intermediate results, outcomes and larger impacts of the Cooperative Development Program at five partner cooperatives and across supply chains and project areas. Ideally, this process will improve future project design, commercial and non-commercial activities carried out throughout the different value chains. A project of this magnitude deserves a deep reflection, taking the time to understand the impacts, achievements, and also share the results with other similar industries and development practitioners.

All this work strives to support cooperatives and contribute to the sustainability of more mission-driven companies that provide economic and social benefits to their membership.

1 https://www.usaid.gov/sites/default/files/documents/1865/USAID_CDP_OneSheet_R5_MF_OOLS.pdf

2 The project eventually expanded to incorporate a coffee cooperative in Colombia, banana cooperatives in Peru and additional innovation awards at five cooperatives. {Something about innovation awards}.

The project resulted in:

- $4.8 million USD in member equity and savings programs at cooperatives, showing that when proper systems are in put in place, cooperative members are willing and able to generate capital investments for their businesses.
- Over $5 million USD in quality premiums generated, demonstrating that quality investments in post-harvest processing and sensory analysis training do have economic benefits for cooperatives in growing specialty markets.
- Productivity increased 85% on average across five cooperatives, and an average of 200% on Model Farms, validating organic practices on demonstration plots and showing that fairly basic interventions that strengthen technical assistance programs and promote management practices can have a positive impact on yields.
- The CDP developed several resources in each project area to systematize lessons learned from this experience and at the same time generate needed material for different industries and supply chains. Links to these resources are available at the end of this document.
- This experience motivated Equal Exchange to shift its business model to incorporate non-commercial activities in a more significant way across our value chains moving forward, as it proved to be a mutually beneficial to our relationships with cooperative partners in each country.

ABOUT THE PROGRAM

Equal Exchange, TCHO, and ACOPAGRO staff with cacao producers in Pucacaca, Peru

Equal Exchange is a worker-owned cooperative and an alternative trade organization that works with farming cooperatives in over 20 countries around the world to sell and distribute products such as coffee, chocolate, tea, bananas and nuts around the United States. Equal Exchange's mission is to build long-term trade partnerships that are economically just and environmentally sound, to foster mutually beneficial relationships between farmers and consumers and to demonstrate, through their success, the contribution of worker co-operatives and fair trade to a more equitable, democratic and sustainable world.

Equal Exchange believes that for small farmers to succeed in international markets, their cooperatives must not only collect and process their raw products, but must also provide them with the technical assistance that helps them to raise productivity levels, add quality and thus value to that product through improved post-harvest procedures and quality controls, and gain farmer loyalty and patronage through capitalization programs focused on member education and equity.

As a company that has historically looked to fair trade to leverage more power for the producer side of the supply chain and find alternatives to unfair labor conditions, low market prices, and a disconnect between consumers and producers, this was the company's first attempt at carrying out a large scale development project. While they were initially hesitant to delve into the world of international aid, the Cooperative Development Program offered a unique opportunity for Equal Exchange to work directly with cooperative partners and to build relationships in a positive way. This was especially important in strengthening Equal Exchange's chocolate supply chain, considering its indirect relationships and the

> **"This work is important because the system that Equal Exchange has relied on for so many years (the fair trade system) is not proving to be a sustainable "game changer" at this point in time. Fair trade has been extremely beneficial and influential, but it is becoming a different animal. The impact is decreasing and there are a lot of reasons for that. Taking on this type of work when we did was a way to test other systems to accomplish our mission and the mission of authentic fair trade of engaging with producers in a way that allows them to think about things other than the day to day of selling beans, not just to survive, but to grow and try new things — to innovate."**
>
> **CRISTINA LIBERATI,** Grant Projects Manager

need to provide a space to work closer with cacao co-operatives. This was large factor in driving the project work around chocolate.

TCHO Chocolate is one of the first large craft chocolate companies in the United States and has been at the forefront of a movement towards more direct sourcing in the "bean to bar" market. They try to tell the story of cacao origins and how that directly impacted the flavor. Established in 2005, TCHO began sourcing beans from around the world by testing them in their Flavor Lab, by roasting, grinding and processing them into liquor. The results would be sent back to the producers, but in 9/10 cases the sample would be rejected because it did not reach their high quality standards.

Their business model for chocolate initially was based on a flavor wheel, which celebrates the diversity of flavors found naturally in cacao beans. Specifically, "Fruity" comes from partner cooperatives in the Peruvian jungle region and "Nutty" is sourced from Ecuadorian producer groups. Producer organizations lacked the skills, knowledge and technical capacity to bring out the flavors their beans were capable of delivering. To make sure they were able to consistently supply the quantity and quality of cacao they needed, TCHO began installing their signature Flavor Labs and supported producer organizations in post harvest processing and sensory analysis training.

TCHO Flavor Wheel

Cocoa liquor produced in a TCHO Flavor Lab

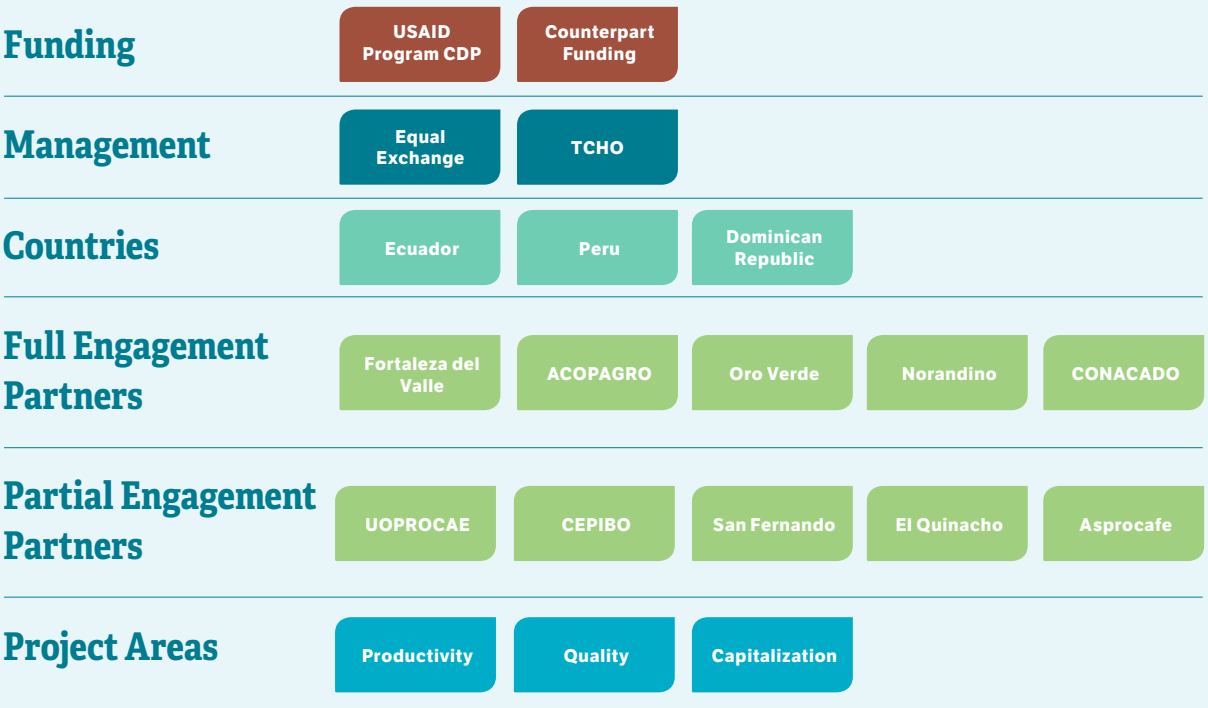


Figure 1: Organizational structure of the Cooperative Development Program

Map of partner countries

With a previous USAID Project, TCHO installed some of the first Flavor Labs in Peru, including one at ACOPAGRO, one of the five main partner cooperatives in this project. These Flavor Labs modeled the coffee cupping model, allowing producer organizations to take more control of their quality by beginning to process cacao beans to liquor on site, rather than waiting for sample results from their buyers. TCHO was already doing this work when the opportunity arose to partner with Equal Exchange in the Cooperative Development Program; Equal Exchange as the cooperative partner and TCHO with a focus on quality training and processing. Initially, the focus on quality was to continue to be able to source the cacao that they needed and drive flavor profiles. TCHO focused on building mutually beneficial relationships in order to consistently secure high quality cacao and to support producer organizations by offering an additional premium to strengthen their organizations. Thus, the interest in forming part of the Cooperative Development Program to begin to face challenges on either side of the supply chain.

Taking into account challenges faced both by producer organizations related to low productivity, limited quality and weak organizations, TCHO, Equal Exchange and cooperative development veteran Ted Weihe solicited funding from the USAID Cooperative Development Program. Taking advantage of Equal Exchange's history as a worker-owned cooperative

Farmer Franklin Ramirez Perea from Pucacaca, Peru

working directly with producer cooperatives matched with TCHO's innovative business model heavily focused on quality cacao, these two socially focused businesses were awarded a grant from this fund in 2010.

Their goal was to strengthen their supply chain partners and engage with them in new and innovative ways. This program was eventually extended into 2019, and included five main partner cooperatives and 4 additional cooperatives were included by the end of the program.

The Cooperative Development Program (CDP) is a competitive grant program funded by the United States Agency for International Development, which responds to the needs of local, host country cooperatives and other member-owned businesses by utilizing the expertise and resources of long-established U.S. cooperative organizations, their members, and volunteers (USAID 2019).

This project was implemented with the support of project coordinators who worked directly at each one of the partner cooperatives, one project manager hired by Equal Exchange, with steering provided by a management team of supply chain experts, members at both TCHO and Equal Exchange and numerous consultants who were contracted as experts in each of the project areas.

Funding

- USAID Funding: **$4,432,078**
- Local Cooperative Counterpart Funding: **$1,592,252**
- Root Capital Counterpart Funding: **$267,561**

Equal Exchange provided Counterpart in the form of salaries and benefits for much of the time spent administering the program, as well as office space.

CONTEXT

Traditional drying practices for cacao can lead to food safety concerns and poor flavor quality – issues that were addressed as part of the CDP

Although Equal Exchange works with a number of different supply chains, and across different continents, their commitment to working with small-scale organic farming cooperatives remains true with each relationship they cultivate. The context of each cooperative differs greatly in terms of geography, climate, historical and political context, but small-scale farmers throughout the world face similar challenges. Limited farm management practices, high cost of inputs, limited knowledge and technical capacity to improve quality and little to no investment on behalf of cooperative members were some of the most pressing issues that lead to the weakening of cooperatives when this project began in 2010. These common themes represented at each of the organizations drove the initial program focus, yet each unique environment shaped the specific activity design with each cooperative.

Dominican Republic

In the Dominican Republic, cacao is an important crop for the economy and people of the Dominican Republic with over 40,000 farming families growing the crop throughout much of the country. Despite this fact, in 2010 the industry was characterized by aging farms and farmers. The old trees, many of them over 50 years old, and the limited application of management practices meant the country was averaging low yields (436 kg/ha). Over the life of the program, Dominican Republic partner CONACADO faced major challenges from shifting microclimates impacting the size and length of harvest with major implications for quality, as well as a continued challenge to find markets for their semi-finished goods.

Common challenges identified by cooperative partners:

PRODUCTIVITY

- Limited/Poor organic management practices on farms
- Lack of investment in farms
- Poor financial management skills reduce farmers' understanding of the potential benefits from investing in on-farm inputs and make saving for investments more difficult. Lack of access to loans further impede farmers' ability to invest in their land.
- Price volatility in international markets may disincentivize farmers to invest in management practices.

QUALITY

- Inadequate varietals for both coffee and cacao
- Inconsistent quality needed to meet demands of specialty international markets
- Lack of established global methodology for cacao flavor analysis
- Lack of quality culture and limitations with post harvest processing practices, technology and infrastructure
- Little to no sensory analysis for cacao done at the cooperative level → only physical analysis

CAPITALIZATION

- Cooperatives face financial challenges which constrain their growth and ability to pass on price premiums to farmers
- Changing the perspective of cooperatives from donor-supported entities to self sustaining, competitive businesses
- Lack of capital/investments by farmers, disconnect with base level organizations, weak organizations

Opportunities:

- Growth of the specialty cacao and chocolate markets, continued thirst for quality in the speciality coffee market
- Relationships between cooperatives and implementing partners pre-existed the project, which allowed for an entry into these communities with a sense of trust to innovate, try new things, make mistakes and learn from that experience in a way that we otherwise weren't able to when limited solely to the commercial relationship.

Ecuador

In Ecuador, partner organizations including Fortaleza del Valle and UOPROCAE had reached a consistent level of quality in their cacao beans. However, more efforts were needed to improve their processing capacity. Indirect relationships with buyers contributed to a lack of understanding about the quality of their products.

There were challenges related to the governance structure of their organizations, as these partners were structured as associations, rather than cooperatives. Organizations faced limitations in capital and pre-harvest financing to buy all of their members beans. Although this was a unique structure to the program, this model was also tested to find alternative strategies to implementing member savings programs, given the legal limitations in the distribution of member patronage.

It is also important to note that the CDP program was

Cesar Palacios, member of CEPIBO banana cooperative in northern Peru

originally slated to end in September of 2015. Equal Exchange received enhancement funding and an extension through September 2017, but due to the closure of the USAID Mission in Ecuador, the project was closed here in 2015.

Peru

Peru produces around 6% of cacao production globally. However, it is the second largest organic cacao producing country, second to only the Dominican Republic. Around 40% of national production is concentrated in the San Martin region. To

Lesly Fasabi Tuanama of Oro Verde cooperative with Leah Madsen of Equal Exchange

understand the context of this work, its important to understand the larger development process that has taken place in the San Martin Region of Peru.

In the 1990s, San Martín had very little cacao, but was home to violence provoked by drug cartels and terrorist groups dependent on coca production. International organizations intervened in the form of establishing new cacao producers, new cooperatives, providing technical assistance and access to international markets, promoting an alternative development model. Several years after these cooperatives were formed, farmers in the region were still facing serious barriers. New to cacao, producers lacking advanced knowledge on cacao production, processing, the cooperative model, and strategies to respond to a growing market more centered around quality.

In the northern region of Piura, Norandino cooperative was dealing with their own challenges, including organizational weaknesses, a varying climate and unstable market. The high presence of pests and diseases like coffee leaf rust also impeded productivity levels for the cooperative, limiting producers' ability to invest in their farms.

Cacao communities near Lamas, San Martín, Peru

OBJECTIVES

The initial objective of the CDP project was for cacao and coffee cooperatives to be able to assist their members with sustainable farm practices, quality processing and access to international export markets at premium prices in Ecuador, Dominican Republic and Peru. By helping improve prices to farmers through better understanding of flavor characteristics and assisting in improved trade, biodiversity in critical cacao and growing areas will be supported by improved economic conditions for sustainable production models.

The specific objectives included:

1. Improve post-harvest processing and drying of cacao beans
2. Promote sensory analysis of improved genetic varietals using TCHO Flavor Lab organoleptic testing
3. Strengthen small farmer cacao cooperatives in Ecuador, Dominican Republic, and Peru
4. Increase farmer/member revenues
5. Support efforts to increase the productivity of biodiverse cacao and coffee farms through training and implementation of proper pruning and harvesting, use of biological pest and disease control, replacing unproductive cacao and coffee trees with grafted improved varieties, and implement improved soil management plans and practices.

Edvin Moyano with one of the cacao genetic varieties selected at Oro Verde

PROGRAM APPROACH

Cristina Liberati of Equal Exchange speaks to members of ACOPAGRO Cooperative in Pucacaca, Peru

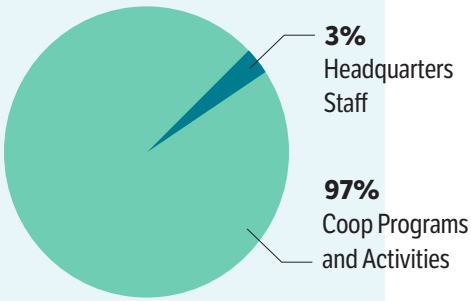
> **"Inclusive means that we can participate and opine, that we not only receive instructions and methodologies from our buyers, but that we can become familiar with our product and know its value."**
>
> **DAVID CONTRERAS,** ACOPAGRO Project Manager

The CDP was the first project of its scale and kind for both EE and TCHO, and was very focused on learning by doing. Although this project was commercially driven, it went beyond typical productivity focused project work to incorporate more of an integral approach by combining not only on farm activities, but also quality improvements and organizational strengthening. By responding to challenges found within their supply chains, both Equal Exchange and TCHO were able to focus on specific areas to find the best approach to dealing with major obstacles.

Inclusive and Democratic Approach

- Cooperatives were highly involved in the design of the project and resource management, including the design of project activities at the farm and cooperative levels. In an effort to reduce overhead and ensure that more resources would be transferred directly to coops or technical support at coops, this program allowed for the cooperatives to design a system that best worked for their context. This meant that the project relied heavily on staff members at the cooperatives as well as project managers for each cooperative. As a result, the project took a much different form at each cooperative in each country and was certainly not a one size fits all approach.

How We Use Our Funds:



Connecting with Experts

- At various levels throughout the project, teaming up with expert consultants in the field was key to success in sharing new ideas throughout the CDP network. By not having offices on the ground, the project used the expertise of producer organizations and their network of experts who understand the local context to implement the most effective programs. This included not only outside consultants, but also building capacity of the network of tasters in Peru, who became sought after internationally for their expertise in cacao quality evaluation.

OPPOSITE PAGE, TOP: Jaime Gomez leads a productivity workshop with model farmers and technicians in the Dominican Republic. BOTTOM: Cacao drying in the sun.

Professional Development

> **"The whole point of people to people assistance is more effective. I think ideas are more important than things."**
>
> **TED WEIHE,** Cooperative Development Expert

- The project's implicit focus on developing knowledge and skills was seen throughout project areas and manifested in different ways. Project and cooperative staff were encouraged and supported to attend conferences, cooperative exchanges and international industry events, and these staff were historically not invited to attend these events. In turn, this broadened their perspective and understanding on their work and helped to develop new techniques to doing their work.
- In Peru, a series of workshops facilitated by a psychologist focusing on human capital or personal development contributed to a mindset shift among members who experienced improvements at the home level, to improve their understanding of their cooperative as a business. At most of our evaluation meetings with co-op members and their families who participated in these workshops, this was the activity that had the greatest and impact on their day-to-day life.

Market based approaches

- Pre-exisitng relationships that were established prior to the project helped to guide project design, responding to relevant challenges facing different supply chains. This work helped to strengthen these commercial relationships, which will continue beyond the life of the project.
- As for-profit businesses with a social focus, neither Equal Exchange nor TCHO depend on development work or project based work in order to operate. The CDP was a positive fit for both companies, allowing for a level of flexibility to support cooperatives while empowering them to drive project implementation to best respond to their unique context. This allowed for the projects to be dynamic and provide additional benefits for cooperatives. The CDP also offered the opportunity for cooperatives and implementers to experiment outside of their regular businesses with innovative ideas, a luxury often out of reach with limited time and resources.

Culture of information sharing:

- Each project area was co-created with Equal Exchange, TCHO and cooperative partners, which was an essential focus from the beginning. By working together to build relationships with the project coordinators and cooperative staff, information was constantly shared and communicated using virtual tools, including Skype, Cropster, Google Drive, among others. In-person visits were also key to maintaining relationships and productive feedback loops.

> **"This project was a huge shift, being very open source, we were always interested in sharing. We were always excited when others were intrigued by this work – other chocolate makers included, which is rare in the chocolate world."**
>
> **BRAD KINTZER,** Chief Chocolate Maker, TCHO

- **Cooperative to Cooperative learning exchanges across project areas were a crucial success factor of the CDP work.** These events which took place in four different countries, bringing together cooperative leaders from each CDP partner to share challenges, ideas, resources and strategies in each project area. A total of 13 exchanges were carried out over 8 years, with the majority focused on quality work to develop the Cacao Sensory Analysis Tasting Form and corresponding documents.

Julia Baumgartner and Cristina Liberati of Equal Exchange meet with members of CONACADO Cooperative in the Dominican Republic

Adaptation over time:

- This project was originally a 5 year project and had 3 extensions, evolutionizing the project over time, incorporating additional groups and projects by the end in 2019. This contributed to the building of lasting relationships not only between buyers and producers but also across supply chains, creating networks of producer organizations who continue to communicate challenges, strategies, and connections. This also allowed enough time to develop skills among cooperatives and see real change. Rather than just implementing short term projects, this project had time to allow for errors, learn from them and correct them. The final extension provided the opportunity to develop resources that have proven to be practical tools to be shared across the industries relevant to the CDP work (See annex).

Project management:

- The project was managed by Equal Exchange and TCHO together with project coordinators from each of the cooperatives. This included constant communication with producers through bi weekly virtual meetings, writing quarterly and annual reports, establishing and following annual work plans and budgets, regular field visits, cooperative exchanges.
- This was complemented by Equal Exchange supply chain managers who would check in on grant activities when they visited the cooperatives for commercial reasons. A Management team at Equal Exchange was involved in annual planning and major oversight, but the day-to-day project work was run by the Grant team and Product Managers. Grant and supply chain managers checked in on general co-op status on a regular basis to exchange information and learning. However, an appropriate distance was maintained in division of commercial matters and accountability for grant activities.

PROJECT AREAS & IMPACT

QUALITY

When this project began, there was no common understanding of cacao quality within the global chocolate industry. Without clear standards or a common language, quality meant different things for different actors throughout the chocolate supply chain. At the same time, TCHO sought to supply a consistent quality cacao at scale to match their growing quality-focused business model. They knew that limited technology at origin kept producer cooperatives from achieving their highest quality potential.

With this in mind, TCHO was focused on bringing technology to post harvest processing and tasting at origin. In order to have high quality cacao to taste, fermentation of cacao beans is one of the most important steps in chocolate making. When done correctly, this process removes harsh and astringent flavors found in the raw bean and brings out the desired flavor profiles[3]. At the time, cooperatives in the CDP program had insufficient infrastructure or knowledge of post harvest processing practices.

In 2010, many cacao farmers had never tasted their own chocolate, let alone chocolate from their own beans. Cooperatives only carried out a physical analysis on their beans, but few had ever processed their beans into liquor to taste. This reality is a huge obstacle to sourcing delicious tasting cacao beans as producer cooperatives did not have the technical equipment nor the skills needed to identify specific flavors or detect defects in their beans. TCHO identified the opportunity to support cooperatives in processing their beans, not only to identify the organoleptic qualities, but also to better understand

Lidia Zambrano Cano of Fortaleza del Valle in Ecuador

the value of their product, maintain consistent sales and eventually obtain higher price premiums for a high quality final product.

Through its quality work in coffee, Equal Exchange witnessed first hand the power of cupping labs as a tool for cooperatives and farmers to better understand their product, improve quality and be more competitive in meeting market needs. The growth of coffee cupping labs at origin was one factor in the successful growth of the specialty coffee industry and gave farmers a much more empowered voice in their relationship with buyers and within the industry as a whole. When first approached by TCHO, Equal Exchange realized that there was an opportunity for the creation of tools and common language for understanding quality quality cacao that could lead to farmer empowerment in an industry characterized by secrecy and a lack of transparency.

Implementing **TCHO Flavor Labs** was key to changing this dynamic in the supply chain. TCHO Flavor Labs are bean-to-bar chocolate labs that allow farmers and research organizations to make chocolate and taste the flavors of their beans in the same way chocolate makers do. And the implementation and improvements of these Flavor Labs open up doors to continued quality work in the remainder of the CDP project. The labs installed during the CDP are owned by the producer groups and they utilize them to produce samples for internal analysis and for all of their clients.

> **"It wasn't just the quality, it was a mutually beneficial, mutual self-interest effort to create a craft quality that could scale. At the time, you could find 10 mt of great cacao, but not 100 mt. It was the idea of co-creation that was interesting to build that quality of scale."**
>
> **BRAD KINTZER,** Chief Chocolate Maker, TCHO

3 https://medium.com/@foodrepublic/tcho-chocolate-partners-with-farmers-to-make-mouthwatering-treats-456b7ffe003b

> **“We didn’t have clear criteria for sensory analysis. We talked about it a lot, but we did not actually have the capacity to do it. A universally accepted definition of fine cacao does not exist as it exists in coffee ... SCA standards for coffee have fostered the empowerment of several people in the chain. Could a universal standard for cacao do the same?”**
>
> **BETH ANN CASPERSEN,** Quality Control Manager, Equal Exchange

José David Contreras Monjaras and Hernan Garcia Meza tasting cocoa liquor at ACOPAGRO’s Flavor Lab

In 2009, the Peruvian Taster’s Network (Red de Catadores) was formed, which represents cooperatives organized with APPPCACAO (the Associaton of Small Peruvian Cacao Farmers). During that time, the Taster’s Network was formed to work on sensory analysis, given that there was very limited progress made on this issue throughout the country. This network grew to include CDP partners from Ecuador and Dominican Republic and met regularly across countries to develop their skills in sensory analysis and developed practical tools to contribute to the cacao industry.

Although today there are about 5 different tasting forms at the industry level to evaluate cacao, the project saw the need to establish a common language for fine and aromatic cacao together with representatives of small producers' cooperatives, something that had not been done previously. Many private companies had their own systems, but it was not common for these systems to be socialized with cacao producers. The communication between buyer and seller of cacao was mostly focused simply on decisions to buy or reject the product.

Quality Activities

Installation of Flavor Labs

TCHO Chocolate was the pioneer of Flavor Labs 'Taste Labs', when it started installing replicas of its laboratory in Peru in 2007. A laboratory consists of a series of machines that are part of a small chocolate factory to process dried cacao beans and turn them into cacao liquor (roasted and ground cacao beans). The chocolate companies mostly evaluate cacao samples in the form of cacao liquor or in the form of chocolate (cacao liquor plus sugar), after having made a cut test or physical analysis. When this project started, and until today, the majority of cacao producers that export their product only perform a physical analysis of their beans. Providing the equipment and knowledge of their operation was a crucial step in the creation of an inclusive system for sensory analysis allowing producers to not only evaluate beans through a visual process but through a flavor analysis as well. The laboratories of large companies can cost USD $ 100,000. In comparison, the TCHO Flavor Labs can cost less than USD $ 10,000. However, they can produce samples of cacao liquor or chocolate in a manner similar to sophisticated laboratories. The project installed or improved five additional laboratories between 2010–2015. The cooperatives were responsible for the construction of the space that the lab equipment would be placed, and the ongoing utilities involved in operating it.

Quality exchanges and training

With the "Cooperation among Cooperatives" approach, which is Principle 6 of Cooperatives, the CDP project carried out biannual exchanges in three countries: the United States, the Dominican Republic and Peru. In these meetings, representatives of the Peruvian Tasters Network, together with cooperatives participating in the CDP project, Equal Exchange and TCHO, exchanged experiences and knowledge related to the quality of cacao. They were trained in different sensory analysis methodologies and together they began to create, evolve and finalize sensory analysis tools for the cacao industry to try to fill the gaps that existed. These gaps were not only a lack of tools for sensory analysis, but also a communication gap, due to the lack of a common sensory language, between representatives of producer groups. These meetings served to promote the flow of information between them and buyers in the United States.

Rhina Campos Vargas, Quality Control Manager at CONACADO

Cacao Sensory Analysis Tasting Form

The creation of the Cacao Sensory Analysis Tasting Form is the result of a process of more than 5 years. During the exchanges, participants studied sensory analysis systems from other industries such as wine, tea, and beer. Equal Exchange and TCHO convened meetings of actors in chocolate in the United States between 2015–2016 to encourage conversation about adopting standards at the industry level. In 2017, the final version of the cacao Sensory Analysis Tasting Form was created, which is based on the sensory analysis of cacao liquor and allows the identification of aromas, attributes and defects of a liquor sample, based on the intensity of these factors and a score, with the possibility of reaching a total of 100 points.

Development and dissemination of final products

Eventually, the organizations involved in this process focused on the creation of a package of materials. This package includes 1) a tasting sheet for sensory analysis along with an instruction guides, 2) a sample preparation protocol for the preparation of cacao liquor in taste laboratories, and 3) a facilitator's guide to train future generations of tasters. A main element of these products since its inception has been the collaboration and free use of these for other cooperatives, for industry and other actors. Therefore, all the developed materials have been created open source with a Creative Commons license.

Food Safety

Since 2011, food safety has undergone large scale advances in the US with the implementation of the Food Safety Modernization Act. As part of this, the Foreign Supplier Verification Program, has laid out new guidelines and standards for foods and agricultural products being imported into the US. In this context, Equal Exchange worked with Hugo Zumarraga, an international food safety expert, to support several CDP cooperatives to meet new food safety standards. The work was carried out in the Dominican Republic and Peru, with the majority of the activities taking place at CONACADO in the Dominican Republic and Acopagro in Peru. Hugo's work consisted of 3 interventions, which were a baseline analysis, follow up training and analysis and a final evaluation. At CONACADO, the work was carried out both at the CONACADO manufacturing plant but also at several collection centers. At Acopagro, the work was carried out at 5 collection centers. Through this work, both cooperatives made vast improvements to their procedures, documentation, training and management. The work impacted not only the quality of the product but it changed the culture by creating more clarity, consistency, efficiency and ownership for all employees involved.

> **"From the perspective of a client, it is impressive to see what has happened here. It is so much more than food safety, it is the development of people and the culture of the organization and the thinking that has gone into the flow of the process. ACOPAGRO is ahead and clients will see care going into the product and this creates a confidence in the product and the organization. A lot of hard work has gone into this. A lot of up front resources to start this – you can take that and implement quickly in other places."**
>
> **DARY GOODRICH,** Chocolate Products Manager, Equal Exchange

Cacao was central to the CDP work in Peru. Members of Equal Exchange, TCHO and ACOPAGRO gather to celebrate the end of the project in the community of Huingoyacu, Peru

Quality indicators

ITEM	2010	2019
Cooperatives practicing sensory analysis	**No**	**Yes**
Number of quality exchanges	**0**	**11**
Number of Flavor Labs	**3**	**35+**
Number of Liquor samples analyzed	**25**	**3,237**
Quality premiums paid to coops in USD$	**$0**	**$5,001,599**
Number of cooperatives producing semi finished products	**1**	**5**

Quality Results:

Today, the CDP cooperatives have seen dramatic growth in quality work compared to 2010. The impacts of the processes carried out and the materials developed have been seen at different levels: cooperatives, customers and the market.

First, at the cooperative level, they have experienced changes both in the way they sell their product and in the investment in internal systems that promote quality. For example, to be able to process their cacao and have a way to communicate their quality, nowadays **cooperatives promote their products through their sensory profile** to customers, not only based on the physical analysis of the beans. This has allowed cooperatives to specialize their offers to customers to **obtain higher prices.**

Second, at the level of chocolate customers, there is a **greater openness and awareness of cacao buyers to discuss quality and sensory analysis** using the same language fostered by more direct communication between the different actors [5]. With this greater opening has come **greater demand for quality from customers.**

Third, at the market level, in 2019, there is **growth in the demand for fine cacaos.** However, despite the important quality premiums that have been reached

in the cooperatives of the CDP project, buyers still need to recognize all the effort required from cacao producers to supply markets for fine chocolates in the form of quality premiums. However, a cost and benefit analysis study is required to better understand the true cost of producing specialized lots of cacao. Although the price premiums may be significant, the costs involved in production and marketing are higher for cooperatives.

The set of activities carried out during the project resulted in the indicators represented in Table 1. It can be noted that through the tasting exchanges, now **all the cooperatives of the CDP project are tasting the cacao to perform the sensory analysis.** All this has led to increases in some cases in the quality premiums that cooperatives receive in contracts, where some of the clients recognize the quality effort and offer a premium price, above market and certification prices.

PRODUCTIVITY

Field Schools (Escuelas de campo) were used to teach farmers new management practices through a practical approach

As a company dedicated to providing high-quality organic products to customers, Equal Exchange was faced with a challenge. Farmers that produce organically consistently have lower yields than farmers who use chemical fertilizers. Under producing farms have become more and more of a reality, where farmers are continually dealing with a changing climate, including increased droughts and temperatures, stronger rain patterns, and varying seasons. With the CDP program, technical teams at various cooperatives set out to test and validate organic management practices for cacao and coffee to motivate farmers to adopt these practices, and increase yields to bridge this gap.

Productivity in this context means the yield in kilos/hectare produced on farms. Before starting the CDP project, cacao producers in Peru, Dominican Republic and Ecuador, had relatively low yields, with an average of less than 500 kilos per hectare. The producers that form part of these cooperatives are small producers, with limited access to land, with an average of two hectares of land per producer. As small farmers, land is limited, so an increase in productivity is essential for scaling their business. Thus, there was an urgency to demonstrate successful organic practices can increase the productivity of each farm and make it more likely to deliver a better livelihood.

Coffee farmer Benedicto Cabrera from Oro Verde cooperative

Grafting improved varieties of cacao

To promote these prioritized practices, the project implemented technical assistance strategies to strengthen each cooperative's technical team. This allowed for practical, hands-on learning using a producer-to-producer methodology. Activities such as field schools, demonstration plots, personalized visits by technicians, training of local agricultural promoters, internal and external internships and exchanges were carried out in each cooperative under their own technical assistance strategy.

By expanding technical assistance programs, agricultural practices could be promoted such as: composting and soil management, irrigation, pest and disease management, pruning and shade management, post-harvest processing and farm renovation by planting of optimal varieties that guarantee both quality and productivity. Given each unique country and regional context, the productivity work was driven by each cooperative and designed according to their system and needs.

In the context of fine and aromatic cacao, the variety of cacao has a great impact on this process. The cooperatives are in the process of implementing varietals of fine and aromatic cacaos that assure the quality of the product while at the same time providing a higher production volume than traditional fine varietals, which tend to be less disease-resistent. This is a new effort that has gained strength since 2010. Preferred varieties have been identified and propagated by the members of all cooperatives for their productive characteristics and resistance to pests and diseases, but at the same time to meet the demands of the specialty chocolate market. Through this work, cooperatives have created clonal gardens and nurseries, to propagate these improved varieties so that more farmers can access these for their farms.

In the context of coffee, agronomists worked together with coffee producers in northern Peru who had been hit by the Coffee Leaf Rust outbreak in 2013 to improve on farm renovations. This work included the same farmer to farmer approach to validate varietals that were resistant to Coffee Leaf Rust, yet still maintained desirable flavors in the cup. Model farms and Field Schools were developed to validate the application of soil amendments and technified irrigation systems.

Productivity Results:

Technical assistance is a service and benefit that a cooperative provides to farmers to share knowledge and techniques that improve farm practices. Although providing technical assistance is essential to improving productivity on farms, resources are often stretched thin at cooperatives. Agronomists may have an unrealistic number of producers to reach, depending on the size of cooperatives and the geography of the land. Thus, cooperatives are driven to use techniques that provide group-based, practical learning, and are producer driven to encourage adoption of practices.

Within the project, **cooperative extension workers provided training and technical assistance to farmers** in pruning, grafting, shade management, soil testing, fertilizer application, irrigation and pest management. Fertilizer facilities were installed at some cooperatives to produce and sell organic fertilizer products to members to reduce cost and improve accessibility. In some cases, technicians interpreted soil analyses to identify nutrient deficiencies in the soil and promote specific soil amendments. Although not always successful, elite plants were identified based on quality and productivity to be propagated in centralized nurseries to be distributed to members.

From cooperative to cooperative, the CDP strategies to improve productivity varied in activities, but

- Productivity doubled at model farms over the 7 year period
- Productivity increased at nearly all cooperatives, for an average of 85%, validating organic practices that are effective in increasing productivity on farms

Basilio Almonte, CONACADO production manager and Quirino Garcia, cacao producer at one of the Model Farms

overall focused on a **farmer-to-farmer methodology.** This strategy was effective in encouraging farmers to **implement new practices** by seeing positive examples of organic farming from fellow cooperative members. The implementation of Field Schools offered a practical learning space on the farm. This activity was the most useful in helping farmers to adopt new practices. Many members experienced a **"cambio de chip"** or mindset shift by witnessing new techniques that take them out of their comfort zone. Although adoption rates of specific practices were not specifically tracked, productivity changes year on year were monitored and in most cases, showed positive results over time.

As the main objective of the project in the area of productivity was the **validation of organic practices**, the results of the indicators measured during the course of the project show that organic practices were indeed validated. The productivity on Model Farms, where specific practices were promoted, managed to double, and in most cases productivity on these closely managed farms was higher than the average at the cooperative overall. Thus, validating organic practices when properly applied.

The challenge now lies in continuing to provide the financial and technical support that farmers need to continue to adopt proper management practices. The technical staff has demonstrated what works, but how do you continue to encourage farmers to implement these activities on the farm? In some cases, cooperatives developed a cost of production analysis to show farmers the cost of investing in on farm renovations and the return on investment. By encouraging further producer-to-producer driven methods, more farmers will adopt the validated practices needed to increase yields on organic farms.

Towards the final year of our program, Equal Exchange offered innovation prizes to spur some additional creativity on the part of the co-ops to test new techniques and adaptation strategies to deal with constantly changing climates. At some cooperatives, resources were developed to encourage other farmers to adopt technologies, considering the costs of production. Some of these resources can be found at the end of this document.

> **"One producer said that he would never in his life allow anyone to damage his plot as they (the agronomists) had done with the his neighbor's farm, and if that was required to become a member of the cooperative, he would never do it. Of course, this producer's farm is located just in front of the demonstration plot. He was observing the development of the plants and productivity over time. To everyone's surprise, this year the same man pruned his entire farm just as they had done it on the demonstration plot. One day he met one of the field technicians and confessed to him. Now he is a promoter of this practice because he could demonstrate how the adult farm changes, positively reacting to proper management practices on the farm."**
>
> **BASILIO ALMONTE,** Technical Team at CONACADO

CAPITALIZATION

In the global south, agricultural cooperatives serve as important development engines for rural communities dependent on products such as cacao or coffee for their livelihoods. These cooperatives serve their members by collecting and marketing their products, gaining access to specialty markets, adding value through processing, and other services such as financing and technical assistance. To provide these services to their members, cooperatives often need access to large amounts of capital to cover operating costs, purchase equipment, offer credit to members and purchase their crops. This means that typically, agricultural cooperatives rely heavily on outside resources such as loans or development projects in order to support their membership and provide services that allow their businesses to grow.

However, the opportunity to generate capital through the membership is often overlooked by the cooperatives themselves and by the partners that support them. Cooperatives are structured to be owned and governed by their members. It is a fundamental cooperative principle that members contribute their own funds to capitalize the cooperative. Cooperative Principle 3, Member Economic Participation, states, "Members contribute equitably to, and democratically control, the capital of their co-operative." Members' contribution to the cooperative's capital base is called member equity, and when those contributions remain in their name, they are considered long-term investments.

Experience has shown creation and growth of a member-owned capital base is crucial to the long-term sustainability of member owned businesses and can provide an effective savings and financial safety net for smallholder farmers.

The weak financial position of the cooperatives reduces the benefits that they can pass on to farmer members, which in turn reduces farmers' potential income. Well-managed cooperatives can contribute to improving productivity and quality of coffee and cacao, which in turn improves farmer incomes. Cooperatives can invest in training and technical assistance to teach farmers proper land management techniques. Investments in post-harvest infrastructure such as fermentation stations, dryers, and storage areas maintain bean quality. Perhaps most importantly, cooperatives negotiate on behalf of farmers to obtain higher prices and better contracts from sellers, and they facilitate the transaction when they buy farmers' beans during the harvest months and store them until an off-taker is found. All of the benefits a cooperative may bring to farmers are predicated on its ability to manage cash flow, finance investments, and use its market position to obtain and pass on better prices to farmers. The baseline assessment of cooperatives' financial positions suggests that the cooperatives were unable to provide these benefits in full due to insufficient funds being retained and reinvested.

Inter-cooperative learning between project partners to exchange ideas, models, challenges and strategies with other agricultural cooperatives in different countries was a fundamental part of this work. This coop-to-coop model was especially important in our work with capitalization, which ambitiously set out to work with cooperatives on creating member equity programs. As a cooperative itself, Equal Exchange worker-owners are required to be shareholders in the business, through the purchase of a stock option and annual profit and loss sharing.

At the beginning of this project, through conversations with farmer partners and several cooperative and financial experts, Equal Exchange realized that many farmer cooperatives and associations in Latin America were missing a key component of cooperative principles and an essential factor in the sustainability of their business: financial investment in the cooperative by members. They lacked what

7 Cooperative Principles:

1. Voluntary and open membership
2. Democratic member control
3. **Member economic participation**
4. Autonomy and independence
5. Education, training and information
6. Cooperation among cooperatives
7. Concern for community

Julia Baumgartner of Equal Exchange with Fabio Rodriguez and Ana Alvarez of Conacado during a productivity workshop in the Dominican Republic

some would call "skin in the game." Over the last seven years, they supported six farmer organizations in building strong member equity and savings programs through support from expert consultants, financial training, cooperative exchanges, and member education.

Capitalization Results:

What started out as an idea was fully adopted by each of the partner cooperatives/associations who developed their own unique member equity or savings programs relevant to their structure and context. With these programs, **members create a savings and invest in their co-op, and their business has working capital that allows them to grow and reduce their dependence on high-interest loans.**

In doing so, the cooperatives in this program have not only added a vehicle through which they can fund their strategic plans, but they have also created **more engaged members.** The total amount of **member equity or savings generated as of 2017 from our partner coops is USD $4,824,409.** Additionally, 100% of members at all cooperatives are now on time

> **"This work changed the way an organization works by creating a new philosophy on the relationship between the business and the members; where members see the responsibility in contributing to the organization and capital in a long term program where they are contributing to the way the coop works. This is a sea change where they are not dependent on donors, which changes how the member and the coop work together. That kind of thing takes time. It took several years to get this concept working. Once it was working and adopted, I think the coops themselves really saw the benefit from it. Now they can finance working capital and some fixed assets and it is a real departure from the past."**
>
> **BOB FLICK,** expert in member equity

Kleber Cruz, president of Norandino Cooperative presents results of capitalization efforts to other CDP partners

with their payments. Aside from these numbers, partners have expressed other **financial and organizational benefits as a result of these member equity programs, including lower interest rates** and better terms from lending institutions. Member equity serves as collateral and shows a stronger commitment by their member owners.

We have found that when farmers invest in their cooperative, they have an ownership stake that creates a much stronger and tangible bond to the cooperative. With an ownership stake comes an ownership voice, and farmers have the responsibility to engage with the cooperative and help guide the organization as a business. With investments from members, cooperatives can become more financially sound and have the resources to provide better services. It can create a healthy cycle with positive impacts for farmers, cooperatives and communities.

Equal Exchange and Root Capital: a multi-layered collaboration

Equal Exchange and Root Capital have a lot in common. Both are Massachusetts-based organizations focused on supporting farmers, but from different angles. While historically Equal Exchange has focused on trade, Root Capital has focused on financing. The two approaches have proved complementary, and the organizations have partnered together to support co-operatives for several years, in several ways. When Equal Exchange signs a contract for coffee, they try to offer pre-harvest financing. Sometimes it is offered directly and other times they partner with finance institutions willing to make loans to farmer groups, like Root Capital. When the time came to find a partner to support some finance and management education through the CDP, Root Capital was a natural ally. In addition to the partnership in CDP and the co-creation of a Cooperative Capitalization Module for training, they have provided other advisory services related to leadership development and strategic planning. When coffee rust hit Latin America in 2013, Equal Exchange also partnered with Root Capital as part of the multi-stakeholder Coffee Farmer Resilience Fund. Our experience has shown that when Equal Exchange, Root Capital and the farmer co-ops join together for commercial lending and development activities, it is a powerful combination.

rootcapital

FINDINGS

The Cooperative Development Program carried out by Equal Exchange and TCHO was highly successful in implementing activities with partner cooperatives to help farmers succeed in international markets. Significant changes have been demonstrated across cooperatives and throughout project areas, which have contributed to building more consolidated, competitive cooperatives for specialty markets.

Theory of change: We believe that for small farmers to succeed in international markets, their cooperatives must not only collect and process their raw products, but must also provide them with the technical assistance that helps them to raise productivity levels, add quality and thus value to that product through improved post-harvest procedures and quality controls, and gain their loyalty and patronage with member education and equity programs.

Questions:

1. **Did an increase in productivity and quality result in higher sales and premiums from buyers and more money to farmers?**
   - Productivity increased by 85% overall across five cooperative partners
   - $5 million in quality premiums generated through quality improvements on the farm, at processing levels and the cooperative's ability to market their product
   - Over 3400 cacao samples analyzed as cooperatives became more familiar with their product's quality and value
   - 4/5 cooperatives increased their revenue, an average of 60% growth, from the beginning of the project
   - Questions remain about whether or not these quality premiums are reaching farmers
2. **Did member equity plans generate allocated capital and increase loyalty to the cooperative?**
   - $4.8 million generated in member equity and savings across 5 cooperatives
   - In 2011, an average of 21% of members were defaulting on loans provided to them by their cooperative. By 2017, that number had decreased to single-digits.
3. **Were financially stable coops that have invested in human capital better able to supply the fine chocolate and specialty coffee markets?**
   - Cacao cooperatives have greatly diversified their customer base and have begun to generate additional premiums for cacao quality.
   - All five cooperatives are now producing value added products, such as chocolate bars or cacao powder, for local markets and in some cases export to international markets.
   - In Peru, cooperatives are beginning to sell to specialty chocolate makers in the national market, receiving higher price premiums, though at a smaller scale.

Overall Project Indicators*

INDICATOR	NUMBER
Number of Producers Reached	**19,026**
Average increase in membership at cooperatives	**23%**
Average Productivity increase on Model Farms	**204%**
Average Productivity Increase at Cooperatives	**85%**
Average increase in cooperative revenue	**41%**
Total Quality Premiums generated at cooperatives	**$5,001,599**
Member equity and savings generated at cooperatives	**$4,824,409**

*Average change across 5 cooperatives 2010–2017

> **"The CDP project positioned both ACOPAGRO and TCHO to grow together (and take advantage of the growth of the specialty chocolate market as a whole). TCHO could not scale (especially the concept of chocolate featuring inherent flavors of cacao) without suppliers who truly understand their product offering and who are able to offer certain profiles with some consistency."**
>
> **LAURA SWEITZER,** Source Program Manager, TCHO

Laura, quoted to the left, with community members of Huingoyacu, at ACOPAGRO

Impact on Equal Exchange and TCHO:

It is important to note that the Cooperative Development Program had a significant impact not only on partner cooperatives, but on implementing partners Equal Exchange and TCHO. It is without question that by interacting with supply partners in new and innovative ways, this work **changed the relationships between producer organizations and chocolate companies** for the betterment of all. Constant communication with project coordinators, technical teams and different cooperative staff other than commercial managers allowed for a much deeper understanding of the organizations.

These changes resulted in a number of improvements at Equal Exchange. First, Equal Exchange began purchasing cocoa powder produced by CONACADO in the Dominican Republic. Prior to the CDP, Equal Exchange was using CONACADO beans that were processed into cocoa powder in Europe. In 2012, Equal Exchange launched chocolate products manufactured in Peru with beans sourced from Acopagro and Oro Verde, two cooperatives which TCHO brought into the CDP program. Equal Exchange also continues to purchase organic coffee from Norandino cooperative.

These improved relationships also contributed to the sales team at Equal Exchange, providing valuable content to be shared with a broad customer base, who are eager to connect more with where their product comes from.

As a business, the CDP work in cooperative development also had a direct influence in Equal Exchange's own member equity program. After participating in this work with expert consultants and understanding capitalization structures and opportunities at the cooperatives, Equal Exchange brought about changes to their model, and altered their statues so that worker owners can now cash out on individual capital accounts after 5 years. Prior to this change, members could not access their internal capital accounts until they left the cooperative.

At a quality level, **relationships have become much more direct.** This is a profound change, given that the chocolate supply chain has been historically indirect and complicated. Through CDP learning in quality efforts, Equal Exchange has begun to implement new practices into their own business. In 2019 they will be offering the first cacao tasting course with quality control and other staff, using the curriculum developed by CDP partner cooperatives.

In terms of productivity, **this project has helped to show that with fairly basic investments in productivity training, yields can increase.** This is best done by strengthening technical assistance programs at the cooperative level. Investing in productivity work for Equal Exchange has become a priority; to not look the other way as farmers are faced with the threats of climate change, producing serious concerns about the future of their crops.

Finally, Equal Exchange has also recognized the **important value of non-commercial work in their supply chains that span more than 50 cooperatives in 20 countries.** In fact, two staff members have since been hired specifically to work on projects and non commercial activities have become part of more than one supply chain's strategic plan. An immense amount of learning about how to be successful in carrying out a development project, to continue to focus on an integral approach. There is much integrity to this work and it is values driven, building off their long term commitment to strengthening democratically organized producer groups. This experience has also offered lessons on what hasn't worked and why, and how to inform future non commercial activities work.

LIMITATIONS & CHALLENGES

Pastor Sangama Sangama of Oro Verde

Despite the overall achievements outlined in this report, challenges related to monitoring and evaluation, staffing, mobile technology and plant nurseries proved to be limited in their success.

Monitoring and evaluation

Lack of clear goals, objectives and indicators at the onset of the program made it difficult to evaluate as the baseline and theory of change was not clear. This final report is based on indicators established at the five main cooperatives, which were started at different moments for different coops, and were measured differently at each cooperative. As a result, the outcomes vary, proving difficult to compare and have a holistic understanding of the impact. Some indicators were difficult to track. The project did not track farmer income, thus it is difficult to decipher whether farmers are actually making more money through price premiums or productivity improvements. Also, farmers' adoption of productivity practices was also limited and better systems should be put in place at the onset of future project work to monitor this. Time and resources for final evaluation prevented doing in-depth surveys with cooperative members to dive deeper into the impact of the project across countries at the farm level. This report is an evaluation of the cooperatives involved, based on final evaluation sessions with partner cooperatives, including focus groups at each cooperative in each project area, project reports, indicator analysis, as well as interviews with key actors. Some cooperatives were involved at a limited level (specific activities, participation in exchanges or 1 year projects), and that information is not included in this report.

Staffing

A common theme throughout the project was overworked cooperative staff. Many participants mentioned this as a "bottleneck", as participants found it difficult to balance their regular activities with field trips for training and workshops. Personnel were often saturated with several responsibilities, including coordinating the CDP project. This caused for delays in reporting and project implementation. It will be a continued challenge to balance this work to include counterpart time and resources from cooperatives while not putting too much pressure on technical staff to carry out additional project work. The use of cooperative staff members or people closely connected to the cooperative are key to successfully implementing project work within their unique context.

Mobile technology

The use of technology, including mobile technology and programs like Cropster proved to be limited in their success. While useful in some ways, certain technology can be overly costly for cooperatives to maintain and are not designed in a way that is adaptable and user-friendly in the field. The lack of adoption by cacao purchasing clients was also a factor in the abandonment of the platform after being subsidized by CDP. Multiple cooperatives expressed the desire for custom software programs for their particular cooperative but these proved to be costly and complicated activities that are not recommended for future CDP work.

Site Location

Over the life of the program, Equal Exchange successfully carried out productivity work in many communities throughout the three program countries. However, we faced a major challenge that invalidated much of our work in one community in Peru. This community is located on an island and towards the end of the project, extreme flooding overwhelmed the farms drastically impacting the soil and trees. This had a major impact on the community and results of the work in this community. A lesson learned for Equal Exchange is to thoroughly evaluate sites prior to selection in order to make sure that there are not major potential external factors that could nullify the work.

Plant nurseries – An illustrative story of failure and learning

Nurseries are fairly common proposal when planning productivity activities. The idea of propagating seedlings, to add more trees to farms, is a good one. However, we have identified several questions that should be asked when considering implementing plant nurseries, including:

- Who owns it?
- Who takes care of it?
- Who gets the seedlings? And who doesn't?
- Do they know how to take care of them once they get them to the farm?
- What are the varieties selected to propagate?
- How much will they be sold for, if anything?
- If you give them away, will recipients expect giveaways in the future?
- What happens if the person who is supposed to manage the nursery is neglectful and you have over 100,000 seedlings that are diseased and useless?

Ok, so that last question might be a bit specific, but it happened during our CDP program. The person who was selected to be the manager of the nursery was a co-op member. During the course of the activity, he was hired for another job in another city but continued to manage the nursery activity remotely, supposedly. In fact, when we visited we found plants that had been severely overrun by insects. The co-op manager took legal action against the nursery manager for breach of contract (luckily, there was a contract) but in the end there were no seedlings and the activity was unsuccessful. We had also found out that the co-op had planned to give away the plants, but we proposed an opportunity to sell them to members and save the money in the farmer member's name, thus starting or contributing to a savings account. When plants are already promised as free, it is hard to convince people to buy them. We learned the hard way that you have to set that system up before you start the activity, and really set up the expectation that nothing will be given away from the beginning of a project.

FUTURE CHALLENGES

Despite the success of this long-term program, cooperatives continue to face significant challenges, including:

Cadmium regulations in Europe and the United States is an enormous threat to the cooperative development work that has been done with cacao organizations in Ecuador and Peru. More research is needed to understand what can be done to mitigate its presence in soils to ensure that farmers reach levels that allow them to sell their cacao.

Gender disparities continue to exist with women producers participating in cooperatives as active members and staff. Through this project, Equal Exchange has identified that they can work to better understand cooperatives and staff to understand limitations in accessing productive resources and promoting women's participation.

Climate Change continues to threaten farmers across the board. This affects not only the production of essential crops like coffee and cacao, but also the quality of these products. Changes in weather patterns cause harvest times to fluctuate, putting pressure on the cooperatives to be more prepared to deal with these changes. Cooperatives are investigating methods that contribute to their ability to adapt to a changing climate, including soil management, diversification on farms, agroforestry and irrigation systems. This work should continue to be supported by international organizations and supply chains interested in the well being of small farmers and their ability to continue to grow crops like coffee and cacao.

The advanced age of cooperative members, where the average age is over 60. Farming is becoming more difficult for this generation to continue and a younger generation, having more opportunities than their parents' generation, is more inclined to migrate to cities or other countries in search of better opportunities. Both cooperatives and the organizations that support them should continue to provide incentives and learning opportunities that are attractive for the next generation of farmers.

Dependence on International Coffee Exchange markets for both coffee and cacao pricing has caused volatile pricing, challenging cooperatives to maintain membership and for farmers to cover their costs of production and to continue farming. By ensuring fair trade minimum pricing, Equal Exchange's cooperative partners have an advantage, but more opportunities need to be provided to continue to differentiate products in international markets.

Capitalization efforts to implement member equity programs are not easy, and take a very long time to see results. As a shift in the way agricultural cooperatives in the developing world work, it is a slow process to get the staff and board members to understand a new concept, adopt it, and finally benefit from it. More evaluation should be carried out to better understand the risks involved in member equity programs for small farmers.

Adoption of new technologies on behalf of farmers continues to be a struggle to promote, despite efforts to positively demonstrate how productivity can increase as a result of proper management practices. This project has shown that farmer to farmer methodologies can be successful at encouraging farmers to adopt new practices, but this is still not widespread. Technical assistance programs continue to be stretched thin at cooperatives and farmers lack access to financial support to invest in their farms, especially when market prices are low. The methodologies are only really as good as the technical assistance programs and technicians that teach them and follow-up on them. Without an emphasis on strengthening the capabilities of the technical team, or farmer's access to technical assistance services, productivity improvement activities are likely to show a poor return on investment over time.

LESSONS LEARNED & CONCLUSIONS

The home of CONACADO model farm owner Luz Mercedes Hernández

The CDP project implemented by Equal Exchange has taken an integral approach to cooperative development and has generated significant changes at farmer cooperatives that have left farmers with greater yields, the cooperatives better equipped to navigate competitive, quality markets and systems in place to generate capital through member investments. This three-pronged approach encompassed many elements of the cooperative: organizational focus, processing and alternative production of primary materials.

Lessons Learned

Key to the success in productivity efforts was the emphasis on strengthening agricultural extension services provided by the cooperative itself, not by a project or outside technicians. By evaluating the productivity at the model farm level, at the intervention level, and at the cooperative level the productivity work focused on validating organic in hopes to promote the adoption of specific practices and to improve cooperative extension methodologies. Access to and production of organic fertilizer/compost is becoming more and more of a common interest for our farmer partners. As additional research comes out about the importance of soil fertility for productivity and the ability of soil to capture carbon in the atmosphere, this work is extremely relevant. However, despite the opportunities to increase yields, application of organic fertilizer continues to be a challenge for farmers to adopt this practice as it implies a change of cultural habits, additional labor and additional costs, and a lack of accessible products. However, more and more farmers are beginning to see the benefits of this practice and the cooperatives are responding by beginning to produce their own organic fertilizer, using local resources while providing access to financing.

The CDP Program capitalized on the rapid growth of the fine and specialty chocolate markets during this period, by forming a group of professionals and representatives of cooperatives of small producers who were trained as professional cacao liquor tasters. This new skill acquired in the process of several years helped generate materials and tools needed in the cacao and chocolate industries. This work has contributed greatly by producing the Cacao Liquor Tasting Form through a collaborative process, a key step towards creating a common language for cacao worldwide. Undoubtedly, the advances of the CDP Project have been part of a movement of growing interest in the fine chocolate industry to create and validate quality standards. This grassroots approach to creating the sensory form is unique in the industry and critical to bring producer voices to the table.

A focus on human capital or professional development through farmer to farmer exchanges and inter cooperative learning was effective in creating a mindset shift ("Cambio de chip") to adopt new techniques and practices. A continuation of these efforts should be included in future development work. Cooperatives are looking for spaces where they can talk to each other about the issues that they are facing and there aren't that many spaces for them to do that. This type of project has the opportunity to create communication networks that can be beneficial.

Conclusions

Both cooperatives and development practitioners alike have underestimated the capacity of small farmers, often with limited resources, to take ownership and lift up their cooperative businesses. When the correct systems are in place, farmer members, even those with limited resources are not too poor to invest in their cooperatives. In fact, through member investments, cooperatives can generate capital needed to collect their product, to improve quality, offer loans to members, or other services. The work in capitalization turned a deep-seated perception

Enrique Sangama Salas, Juan Castulo Sangama, Geuster Sangama Navarro, and Dary Goodrich in Huingoyacu, Peru

> **"These types of projects are important to Equal Exchange because we are working with vulnerable populations who are typically at the bottom of the system, are not empowered and don't have access to a lot of resources. So we wanted to use this to give them opportunities that are more flexible than others out there. For Equal Exchange, in a self serving way, we are working with small scale farmers and there are so many challenges around that — having a viable crop and the risks involved in that at every level: annually with climate changes, government policies to unstable coops. We could use this as a tool to strengthen these organizations. Also, we've learned that it takes our relationship to a whole new level."**
>
> **DARY GOODRICH,** Chocolate Products Manager, Equal Exchange

that "farmers are too poor to invest in their organizations" on its head. More engaged cooperative members are saving and investing in their cooperatives, generating a total of $4.8 million in savings and investments as a result of capitalization efforts. Capitalization work must be accompanied by efforts to increase productivity and improve quality premiums. These efforts can put more money into farmers' pockets, providing a means to invest in their cooperatives. Farmers must also see the benefits of their investment in the form of improved services and transparency provided by the cooperative.

Cooperatives are better positioned to supply specialty markets with high quality products as a result of improved processing and capacity to not only produce but also communicate and negotiate improved prices for their product. This has been shown through the generation of $5 million in quality premiums across CDP partner cooperatives. As the craft and bean to bar movements and generally people's interest in connecting with their farmers increases, this work provided more stories, more connections that helped to meet that need/desire for information.

EE's approach to the first CDP was focused on the creation and testing of models. This allowed EE and our cooperative partners to try new things and innovate on a small but meaningful scale. If the model was successful, the cooperatives then had the data and knowledge to expand the work outside of the CDP. This was critical to EE's goal of creating something sustainable that would survive and be relevant beyond the end of the program and funding. As a businesses that does not typically rely on development funding for their operations, Equal Exchange has proven to be a unique implementer of cooperative development work, implementing highly successful activities at origin, focusing on professional development and lasting relationships without creating a culture of dependency on outside funding. Given all of the factors impacting agriculture and cooperatives today the combination of non commercial work at EE in parallel with commercial activity has proven to be a strong model.

The inclusive approach that has prioritized this process has been an attempt to change the balance of power in the value chain, where the actors that process and distribute the final product receive the largest percentage of the profit and historically have had the highest authority. This initiative is one that takes into account the perspective, reality and need of producers and cooperatives in order to ensure that they have a say in the establishment of industry standards and development work.

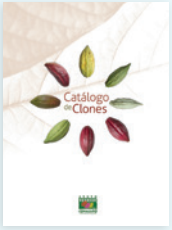
Resources Developed

The following are resources developed throughout the project related to quality, productivity and capitalization where you can find more information on project activities and results as well as information.

Productivity

CONACADO MODEL FARM SYSTEMATIZATION DOCUMENT

https://equalexchange.coop/sites/default/files/INFORMEParcelasDemostrativasCONACADO2018.pdf



CLONAL CATALOGUE — DOMINICAN REPUBLIC

https://equalexchange.coop/sites/default/files/CATALOGO_CLONES_FINAL_Enero25018.pdf

Capitalization

NOT TOO POOR TO INVEST DOCUMENT

English
https://equalexchange.coop/sites/default/files/EE_Not-Too-Poor-to-Invest.pdf

Spanish
https://equalexchange.coop/sites/default/files/EENotTooPoorToInvest_Spanish_vF.pdf

ROOT CAPITAL/EQUAL EXCHANGE FACILITATOR'S GUIDE TO THE COOPERATIVE CAPITALIZATION TRAINING MODULE

Available upon request

FOR MORE INFORMATION:

http://equalexchange.coop/usaid-cooperative-development-program

Quality

CACAO SENSORY ANALYSIS TASTING FORM

English
https://equalexchange.coop/sites/default/files/CDP_Cacao_Tasting_Form_and_Instructions_color.pdf

Spanish
https://equalexchange.coop/sites/default/files/CacaoTastingForm_wInstructions_vESP-color.pdf

GUIDE TO CACAO SENSORY ANALYSIS TASTING FORM

English
https://equalexchange.coop/sites/default/files/Tasting-Guide_vF-JUNE2018.pdf

Spanish
https://equalexchange.coop/sites/default/files/Tasting-Guide_vF-JUNIO2018-ESP.pdf

FACILITATOR'S GUIDE TO THE CACAO TASTER TRAINING CURRICULUM

https://equalexchange.coop/usaid-cooperative-development-program

PROTOCOL FOR THE PREPARATION OF COCOA LIQUOR FOR SENSORY ANALYSIS

English
https://equalexchange.coop/sites/default/files/4923_ee-cdp_sample-prep-protocol_vf_single-pages-for-web.pdf

Spanish
https://equalexchange.coop/sites/default/files/4923_ee-cdp_sample-prep-protocol_esp_vf_single-pages-for-web-a4.pdf

MANUAL DE BUENAS PRÁCTICAS DEL MANEJO — ACOPAGRO

https://equalexchange.coop/sites/default/files/ACOPAGRO_BPM_2017.pdf

Acknowledgements

When this project began, it marked the beginning of a journey into territory that Equal Exchange and our partners had not navigated through before on such a grand scale. We were fortunate to build on some pre-existing relationships with our partners, grounded in the philosophy and practice of fair trade. This provided a solid foundation to build from but we still had to build trust, make new connections and co-create.

At Equal Exchange and TCHO, new systems had to be created to manage development projects. Our co-op partners had to adjust to a new way of doing business with us. We engaged on a different level with consultant partners like Root Capital, who we also had a pre-existing relationship with to provide loans to our coffee partners so that they could harvest the coffee that we purchase. And we had to build a broader network of allies to help us in areas where we lacked expertise.

All of these experiences have made our relationships richer and more vibrant, and we are grateful for each and every one. None of this would have been possible without a few key people who were champions of this work. The project coordinators at our partner co-operatives, especially José David Contreras Monjarás, Jaime Gomez, Basilio Almonte and Gilmar Castillo, who worked incredibly hard and their efforts will have long-lasting impacts at their co-operatives and beyond. They in turn were supported by technical and administrative staff that received much less recognition than they deserved — some of those staff include Aldo Reyes, Miguel Trujillo Valderrama, Wendy Rodriguez, Lusmila Paredes Ortiz, Danidsa Amasifuen, Miriam Maza Asencios, Hernan García Meza, Holger Vera, Julio Quiroz, Kiler Hidalgo, Liz Amanda Flores Cardenas, Isaias Marin Duran, Rosario Medina, Glenys Rosario, Alfonso Baldera, Rhina Campos, and Martin Dominguez. There are more than I could ever list here. Support from general managers such as Gonzalo Ríos, Fernando Reyes, Raúl Calle, Hildebrando Cardenas, Isidoro de la Rosa, Berto Zambrano, Francisco Peñarrieta, Hildebrando Cardenas, was also crucial to project success.

The multi-country team that worked on quality products, led by Zara Saavedra, dedicated unpaid time and energy to develop tools that are having an impact on the future of the chocolate industry. Capitalization experts, Ted Weihe, Robert Flick and Barry Silver, addressed a significant gap in knowledge of cooperative finance and human capital development. Their knowledge and wisdom were key to begin cracking the member equity code.

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More than anything, our gratitude goes out to all of the farming families of the co-operatives we worked with. They are why we did this, and they placed their trust in us. We thank them for all they have taught us and we hope we have not let them down.

COLLABORATORS

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TCHO

The Meza Cabrera family and technician Javier Valencia of UOPROCAE with team members from Equal Exchange and TCHO

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